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JANUARY 1905

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CONTENTS

EDITORIAL:

The A. I. A. Annual Convention - Fire Loss Still Increasing.....41

FINANCING BUILDING OPERATIONS.....42

THE RELATION OF THE ENGINEER TO THE ARCHITECT 43

PROCEEDINGS, CONVENTION AMERICAN INSTITUTE OF ARCHITECTS..... 45

MOSAICS..... 48

OUR ILLUSTRATIONS 48

INDEX TO ADVERTISEMENTS.....IX

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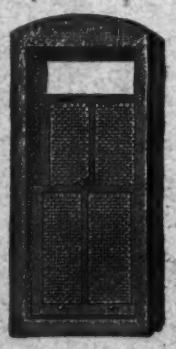

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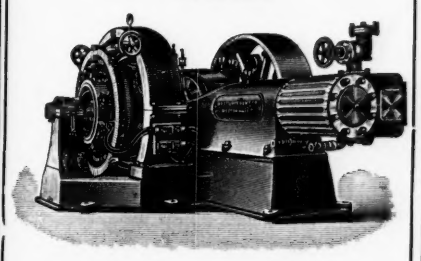

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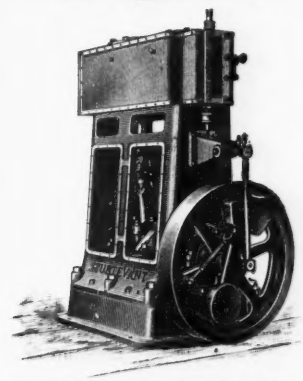

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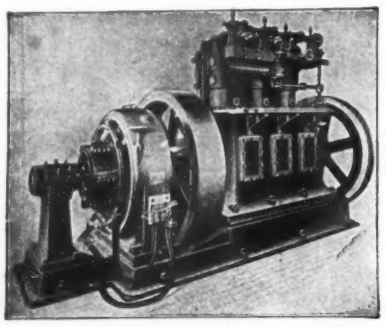

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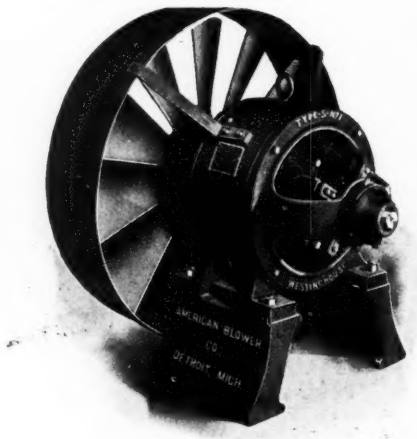

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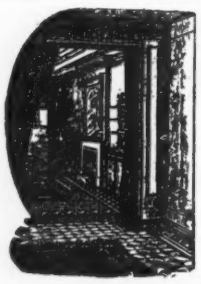

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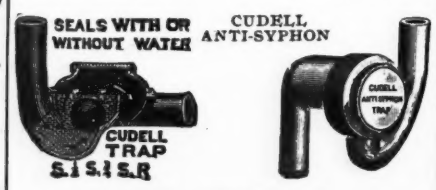

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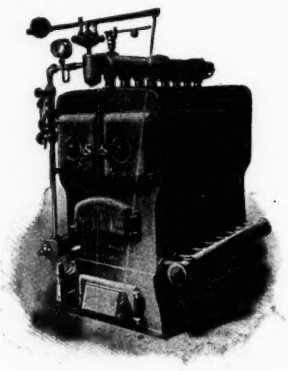

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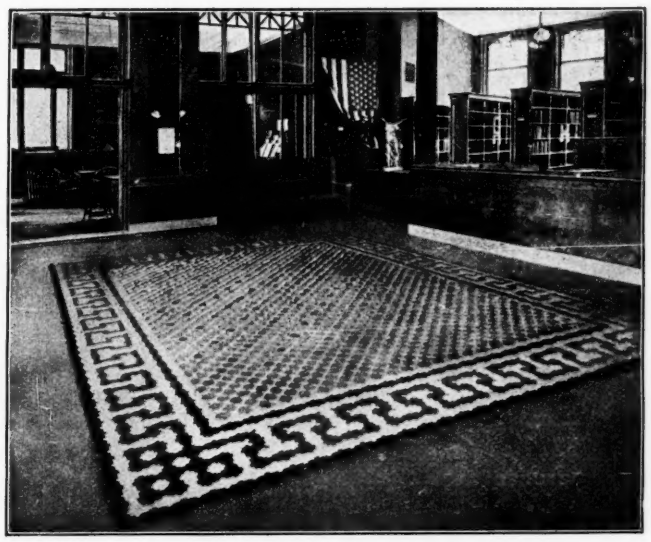

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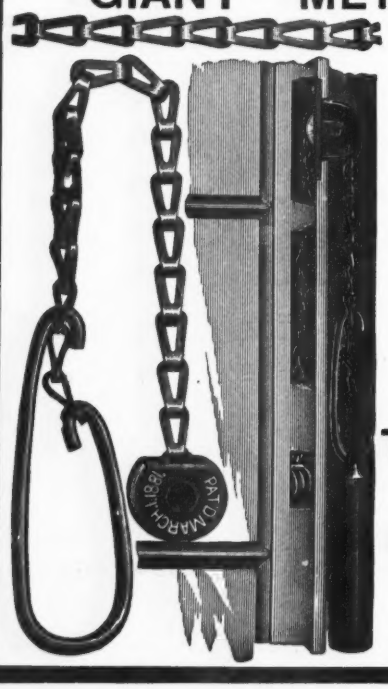

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Bath Room Fixtures. — Standard Sanitary Mfg. Co. V
Bath Tubs. — Standard Sanitary Mfg. Co. V
Blinds and Screens. — Willer Mfg. Co., Milwaukee, Wis. .....
Boats. — W. H. Mullins..... VIII
Brass Goods (Plumbers'). — Standard Sanitary Mfg. Co. V
Bricks (Pressed). — Chicago Hydraulic Press Brick Co. ..... VI; Findlay Hydraulic Press Brick Co. ..... VI; Illinois Hydraulic Press Brick Co. ..... VI; Kansas City Hydraulic Press Brick Co..... VI; Menominee Hydraulic Press Brick Co..... VI; Omaha Hydraulic Press Brick Co. ..... VI; St. Louis Hydraulic Press Brick Co. VI
Bricks (Enameled). — Hydraulic Press Brick Co. VI
Brick (Ornamental). — Chicago Hydraulic Press Brick Co. ..... VI; Findlay Hydraulic Press Brick Co. ..... VI; Hydraulic Press Brick Co. VI; Illinois Hydraulic Press Brick Co. ..... VI; Kansas City Hydraulic Press Brick Co..... VI; Menominee Hydraulic Press Brick Co..... VI; Omaha Hydraulic Press Brick Co. VI
Builders' Hardware. — Orr & Locket Hdw. Co.. XVI; The Yale & Towne Mfg. Co. XVI
Builders' Sundries. — The Yale & Towne Mfg. Co. XVI
Building Papers. — Cabot, Samuel XII
Cements. — French, S. H. & Co..... VI
Closets. — Standard Sanitary Mfg. Co. V
Conduit. — National Fireproofiing Co. XIV
Cordage. — Samson Cordage Works... XVI
Creosote Stains. — Cabot, Samuel XII
Drawing Material and Implements. — Abbott, A. H. & Co.... XII
Drinking Fountains. — Standard Sanitary Mfg. Co. V
Electric Plants. — Westinghouse Elec. & Mfg. Co. ..... IV; The Westinghouse Machine Co..... IV
Elevators. — The J. W. Reedy Elevator Co. XIII
Enameled Iron (Plumbers' Ware). — Standard Sanitary Mfg. Co. V
Engineers. — Westinghouse Elec. & Mfg. Co. ..... IV; The Westinghouse Machine Co. IV
Fireproof Doors. — Kinnear Mfg. Co..... X
Fireproof Shutters. — Kinnear Mfg. Co..... X
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Fire Retarding Windows. — James A. Miller & Bro.. II
Floor Polish. — Butcher Polish Co..... V
Fuel Economizers. — B. F. Sturtevant Co..... III
Gas Engines. — Westinghouse Elec. & Mfg. Co. ..... IV; The Westinghouse Machine Co. IV
Hardware. — The Yale & Towne Mfg. Co. XVI
Heating. — B. F. Sturtevant Co..... III; Thatcher Furnace Co.... VI
Heating and Ventilating Apparatus. — B. F. Sturtevant Co..... III
Hollow Block. — National Fireproofing Co. XIV
Ice and Refrigerating Machinery. — Westinghouse Elec. & Mfg. Co. ..... IV; The Westinghouse Machine Co. IV
Lamps, Incandescent. — Westinghouse Elec. & Mfg. Co. ..... IV; Sawyer Man Elec. Co...
Landscape Architect. — Thomas Hawkes VI
Laundry Tubs. — Standard Sanitary Mfg. Co. V
Lavatories. — Standard Sanitary Mfg. Co. V
Lead Pipe. — Standard Sanitary Mfg. Co. V
Locks. — The Yale & Towne Mfg. Co. XVI
Mail Chutes. — Cutler Manufacturing Co. XIII
Marble. — Standard Sanitary Mfg. Co. V
Mechanical Stokers. — Westinghouse Elec. & Mfg. Co. ..... IV; The Westinghouse Machine Co. IV
Metal Ceilings. — Berger Mfg. Co..... VI
Mortar Colors. — French, S. H., & Co..... VI
Paints, Oils and Varnishes. — Joseph Dixon Crucible Co. ..... X; New Jersey Zinc Co..... X; Smith, Edward, & Co.... XVI
Pencils. — Joseph Dixon Crucible Co. X
Plumbers' Pittings. — Standard Sanitary Mfg. Co. V
Plumbers' Ware, Porcelain Enameled. — Standard Sanitary Mfg. Co. V
Railroads. — Baltimore & Ohio R. R. XII; Big Four Route..... XIII; Chesapeake & Ohio R. R.. XIII; Chicago & Alton R'y.... VIII; Chicago, Burlington & Quincy R'y. ..... III; Chicago, Milwaukee & St. Paul ..... XIV; Grand Trunk Lines..... IV; Illinois Central ..... XIII; The Lake Shore Route... XVI; Monon & C. H. & D. Route ..... XII; Missouri Pacific R'y.....V, XIV; New York Central R. R.. Queen & Crescent Route. .....VII, VIII; Southern R'y. .....VII, VIII; Southern Pacific Co..... XV; Wisconsin Central VI
Range Closets. — Standard Sanitary Mfg. Co. V
Reflectors. — Frink, I. P..... VI
Roofing Tile. — National Tile Roofing Co. II; Celadon Roofing Tile Co., Manufacturers of Highest Grade Roofing Tile, 204 Dearborn St., Chicago; 156 Fifth Ave., New York. Factories: Alfred, N. Y., and Ottawa, Ill. .....
Roofing Tin. — American Sheet & Tin Plate Co. ..... VII; N. & G. Taylor Co..... III
Rolling Doors and Shutters (Steel). — Kinnear Mfg. Co..... X
Rubber Tiling. — New York Belting and Packing Co. VII
Sanitary Appliances. — Cudell, F. E..... VI; Standard Sanitary Mfg. Co. V
Sanitary Woodwork. — Standard Sanitary Mfg. Co. V
Sash Cords and Chains. — Smith & Egge Mfg. Co.. VIII; Samson Cordage Works.. XVI
Sheathing and Deadening Quilt. — Cabot, Samuel XII
Shingle Stain. — Cabot, Samuel ..... XII; Dexter Bros. XV
Showers, Permanent and Portable. — Standard Sanitary Mfg. Co. V
Sidewalk and Vault Lights. — Brown Bros. Mfg. Co... V
Sinks, Porcelain Enameled. — Standard Sanitary Mfg. Co. V
Snow Guards. — Folsom Snow Guard Co. IV
Spring Hinges. — Smith & Egge Mfg. Co.. VIII
Stained and Decorative Glass. — Louis J. Millet..... XIV
Steam Engines. — Westinghouse Elec. & Mfg. Co. ..... IV; The Westinghouse Machine Co. IV
Steam Loops. — Westinghouse Elec. & Mfg. Co. ..... IV; The Westinghouse Machine Co. IV
Steel Rolling Doors. — Kinnear Mfg. Co..... X
Steel Rolling Shutters. — Kinnear Mfg. Co..... X
Steel Shutters. — Kinnear Mfg. Co..... X
Stokers. — Westinghouse Elec. & Mfg. Co. ..... IV; The Westinghouse Machine Co. IV
Temperature Regulator. — The Powers Regulator Co. VIII
Terra Cotta. — Northwestern Terra-Cotta Works ..... II; Winkle Terra Cotta Co.. XV
Tile (Rubber). — New York Belting & Packing Co., Ltd..... VII
Trees. — Peterson Nursery II
Urinals, Porcelain Enameled. — Standard Sanitary Mfg. Co. V
Valves (Steam). — Jenkins Bros. VIII
Vimometers. — Standard Sanitary Mfg. Co. V
Window Lines. — Samson Cordage Works.. XVI
Wood Floors. — Moore, E. B., & Co..... VI; National Wood Floor Co. XIII

Alphabetical Index of Advertisers.

Abbott, A. H. & Co..... XII
American Sheet & Tin Plate Co. VII
Baltimore & Ohio R. R. Co. XII
Berger Mfg. Co..... VI
Big Four Route..... XIII
Brown Bros. Mfg. Co..... V
Butcher Polish Co..... V
Celadon Roofing Tile Co... IX
Chesapeake & Ohio R. R... XIII
Chicago, Burlington & Quincy R. R..... III
Chicago, Milwaukee & St. Paul R. R..... XIV
Chicago & Alton R. R..... VIII
Crane Co. .....VI, XV
Cudell, F. E..... VI
Cutler Mfg. Co..... XIII
Dexter Bros. XV
Dixon, Jos. Crucible Co..... X
Folsom Snow Guard Co.... IV
French, S. H. & Co..... VI
Frink, I. P..... VI
Grand Trunk R. R..... IV
Hawkes Thomas VI
Hydraulic Press Brick Co.. VI
Illinois Central R'y..... XIII
Illinois Terra Cotta Lumber Co. VIII
Jenkins Bros. VIII
Kinnear Mfg. Co..... X
Lake Shore Route..... XVI
Miller, James A. & Bro.... II
Missouri Pacific R'y.....V, XIV
Monon & C. H. & D. Route XII
Moore, E. B. & Co..... VI
Mullins, W. H..... VIII
National Fireproofing Co.... XIV
National Tile Roofing Co.. II
National Wood Floor Co... XIII
New Jersey Zinc Co..... X
New York Belting and Packing Co. VII
New York Central Ry..... VII
Northwestern Terra Cotta Co. II
Orr & Lockett Hardware Co. XVI
Peterson Nursery II
Pioneer Fireproofing Co.... XIV
Powers Regulator Co..... VIII
Queen & Crescent Route. VII, VIII
Reedy, J. W. Elevator Co.. XIII
Roebling Construction Co.. XII
Samson Cordage Works.... XVI
Smith, E. & Co..... XVI
Smith & Egge Mfg. Co.... VIII
Southern Pacific Co..... XV
Southern Railway .....VII, VIII
Standard Sanitary Mfg. Co. V
Sturtevant, B. F. Co..... III
Taylor, N & G. Co..... III
Taylor, J. W..... II
Thatcher Furnace Co..... VI
Westinghouse Electric & Mfg. Co. IV
Westinghouse Machine Co.. IV
Wiley, John & Sons..... XIII
Willer Mfg. Co..... IX
Winkle Terra Cotta Co.... XV
Winslow Bros. Co..... II
Wisconsin Central Ry..... VI
Yale & Towne Mfg. Co.... XVI
John Wiley & Sons..... XIII

*** Roman figures refer to advertising pages.**

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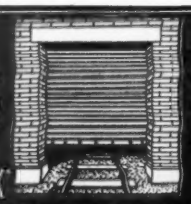
KINNEAR
STEEL ROLLING
DOORS SHUTTERS
SEND FOR CATALOGUE "K"



BOSTON - 85 WATER ST.
NEW YORK - 45 VESEY ST.
CHICAGO - 112 CLARK ST.
PHILADELPHIA — 1011 CHESTNUT ST.
THE KINNEAR MFG. CO. COLUMBUS OHIO, U.S.A.

DIXONS
SILICA GRAPHITE PAINT
FOR THE PROTECTION OF
FENCES, BRIDGES, ROOFS AND BUILDINGS
WRITE FOR "COLORS AND SPECIFICATIONS"
JOSEPH DIXON CRUCIBLE CO., JERSEY CITY, N.J., U.S.A.

GRAND TRUNK RAILWAY SYSTEM

Chicago
TO
Quebec

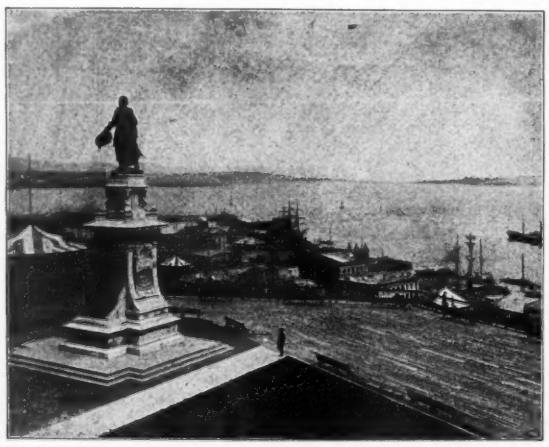
Do not go to Europe to see a 16th Century city; accessible by the

Grand Trunk Ry. System
FOR
$38.85 Round Trip. Return limit Oct. 31, '04
Stop-over privileges allowed en route

$4 additional will give you the St. Lawrence River trip from Toronto to Montreal.

$3 additional from Kingston to Montreal.

Send for descriptive folder to
GEO. W. VAUX
A. G. P. A.
Grand Trunk Ry. System
CHICAGO



"Paint

is as *important* as Fire Insurance: A building may never burn, but unless constantly *protected by paint* it will surely decay. Decay is slow burning: Paint is Insurance against *Decay.*"

The Kind of Paint

that protects best and longest, and remains beautiful while protecting, is based on

Oxide of Zinc

FREE:
Our Practical Pamphlets:
"The Paint Question"
"Paints in Architecture"
"Specifications for Architects"
"Paint: How, Why and When"
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The
New Jersey Zinc Co.
71 Broadway, New York

We do not grind zinc in oil. A list of zinc white paint manufacturers will be furnished on request.

BOOKS ON THE ARCHITECTURE OF ALL COUNTRIES : : :

Bruno Hessling Co., Ltd.
PUBLISHERS and IMPORTERS

WRITE FOR CATALOGUE

64 East 12th St. New York, N. Y.

Florida, New Orleans and Cuba

Best Reached Via

Queen and Crescent Route

and

Southern Railway

3 TRAINS A DAY TO FLORIDA
2 TRAINS A DAY TO NEW ORLEANS

Winter Tourist Tickets now on sale at reduced rates.
Also Variable Route Tickets good going via
Lookout Mountain and returning
via Asheville.

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General Manager

W. C. Rinearson,
General Passenger Agent

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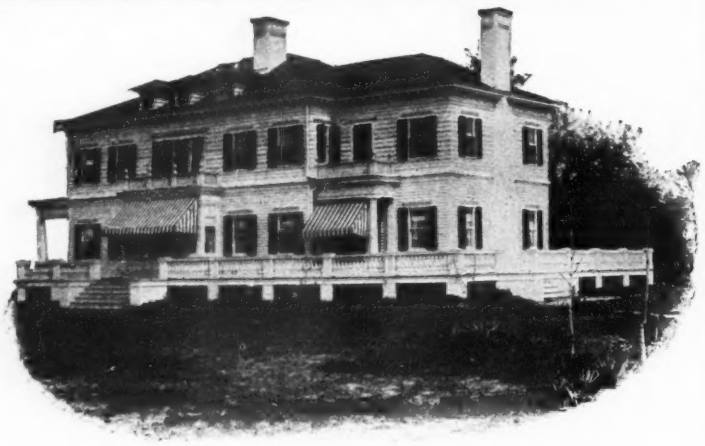

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Cabot's Shingle Stains ..

MADE OF THE BEST PIGMENTS, PURE LINSEED OIL AND CREOSOTE, THE BEST WOOD PRESERVATIVE KNOWN

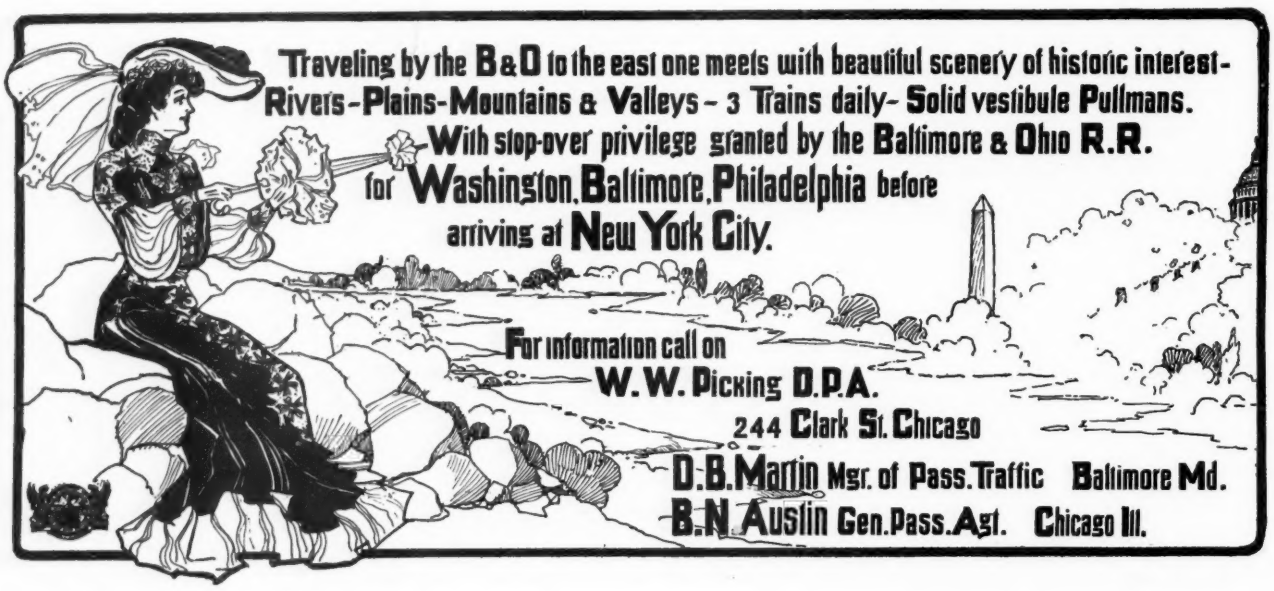
The Standard Stains for over twenty years

Samples sent on request

Samuel Cabot

Sole Manufacturer

28 Dearborn Avenue, CHICAGO — Oliver Bldg., 141 Milk St., BOSTON


Traveling by the B&O to the east one meets with beautiful scenery of historic interest-
Rivers-Plains-Mountains & Valleys-3 Trains daily-Solid vestibule Pullmans.
With stop-over privilege granted by the Baltimore & Ohio R.R.
for Washington, Baltimore, Philadelphia before
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For information call on
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Adjoining Resorts in Indiana

On the MONON ROUTE

Wonderful curative waters for diseased conditions of the digestive organs; magnificent fireproof modern hotels; rest, recuperation and recreation. Two trains daily via Monon Route.

Round-Trip Excursion Rate From Chicago **$12.45**

Folders and facts free. Address

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BLUE-PRINTS.
50 Madison Street, CHICAGO.

The Roebling System of Fire-Proof Construction.

HIGHEST EFFICIENCY IN THE FIRE AND WATER TESTS OF THE NEW YORK BUILDING DEPARTMENT, AND NOW THE RECOGNIZED STANDARD OF FIRE-PROOF CONSTRUCTION.

THE ROEBLING CONSTRUCTION CO.,

121 Liberty Street, NEW YORK CITY. — *171 Lake Street, CHICAGO, ILL*

SEND FOR CATALOGUE.

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THE INLAND ARCHITECT AND NEWS RECORD

VOL. XLIV. JANUARY, 1905 No. 6

A Monthly Journal Devoted to

ARCHITECTURE,

CONSTRUCTION, DECORATION AND FURNISHING IN THE WEST

PUBLISHED BY PORTER, TAYLOR & CO.

PONTIAC BUILDING, CHICAGO, ILL.

Entered at Chicago, Ill., Postoffice as second-class matter.

SUBSCRIPTION $10.00 a year in advance. Single copies $1.00.

All communications intended for the Inland Architect should be addressed to Porter, Taylor & Co., 505 Pontiac Bldg., who have purchased the publication. As publishers of two other successful trade papers, they are in a position not only to maintain the present high standard of the Inland Architect, but will increase its scope and add many valuable features during the coming year.

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THE ARCHITECTURAL LEAGUE OF AMERICA

(ORGANIZED 1899.)

The Architectural League of New York.	The Detroit Architectural Club.
The T Square Club, Philadelphia.	The St. Louis Architectural Club.
The Cleveland Architectural Club.	The Washington Architectural Club.
The Toronto Architectural Club.	The Architects' Club, U. of Ill.
The Pittsburg Architectural Club.	The Toledo Architectural Club.
The Cincinnati Chapter A. I. A.	The National Sculpture Society.
The Brooklyn Chapter A. I. A.	The National Society of Mural Painters.
The Chicago Architectural Club.	

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The A. I. A. Annual Convention

Architecture in all its phases was a leading topic in Washington during the week of January 9. The carefully planned arrangements for the American Institute of Architects' Convention awakened the lively interest not only of the Architectural profession and the allied arts, but also of distinguished statesmen, prelates, and art patrons. The indebtedness to the profession for their efforts towards municipal improvement, especially at the nation's capital, was gracefully acknowledged by President Roosevelt and other speakers at the banquet. On this occasion Augustus Saint Gaudens in a few happy words expressed his gratification at the munificent gifts of Mr. Walter and J. Pierpont Morgan to the American Academy at Rome. Apparently these gifts influenced action upon the proposed advance in dues to assist in supporting the Octagon quarters. The general sentiment favored relying upon donations for this object rather than upon dues. The changes adopted in the by-laws will do much towards increasing membership. In his paper on "Municipal Improvement" Frank Miles Day justly criticised the lack of public spirit and of art perception in Baltimore whereby the broad scheme of Mr. Olmsted for improvement in the rehabilitation and beautifying of the city was curtailed to the utmost utilitarianism. Mr. Day characterized this as a splendid opportunity lost such as prevailed when London rejected the Wren plan for its improvement. R. Clipston Sturgis in his paper made a strong point against the maintenance of a municipal architect by the statement that men of the best type could not often be secured because of the insufficient salary offered. The Convention was in every way highly successful and the drawing together in alternate years of the Institute and the government officials is sure to result more and more in the uplifting of government architecture.

Fire Loss Still Increasing

The enormous total of $252,364,000 is required to express the fire loss in 1904 in the United States and Canada, the greatest loss for any year since the Chicago fire. While the total includes the great Baltimore, Rochester, and Toronto fires, without these the loss is still $10,000,000 more than for the year previous. The construction of high buildings with large areas causes an enormous fire peril in the principal cities. In New York are many blocks the destruction of any one of which would entail a loss of from $10,000,000 to $25,000,000. These are conditions that urge architects to use their utmost influence with owners to build structures that shall combine the best modern methods in fire resisting construction. They also direct the attention of the profession to the desirability of co-operation with such bodies as the National Fire Protection Association. The delegate to the meeting last May of this association from the American Institute of Architects reported to the Convention that the Fire Protection Association was anxious that the Institute should become an active member of its association. It is of great importance that there be united and persistent action by all associations that have to do with buildings to reduce to the minimum this frightful annual fire loss.

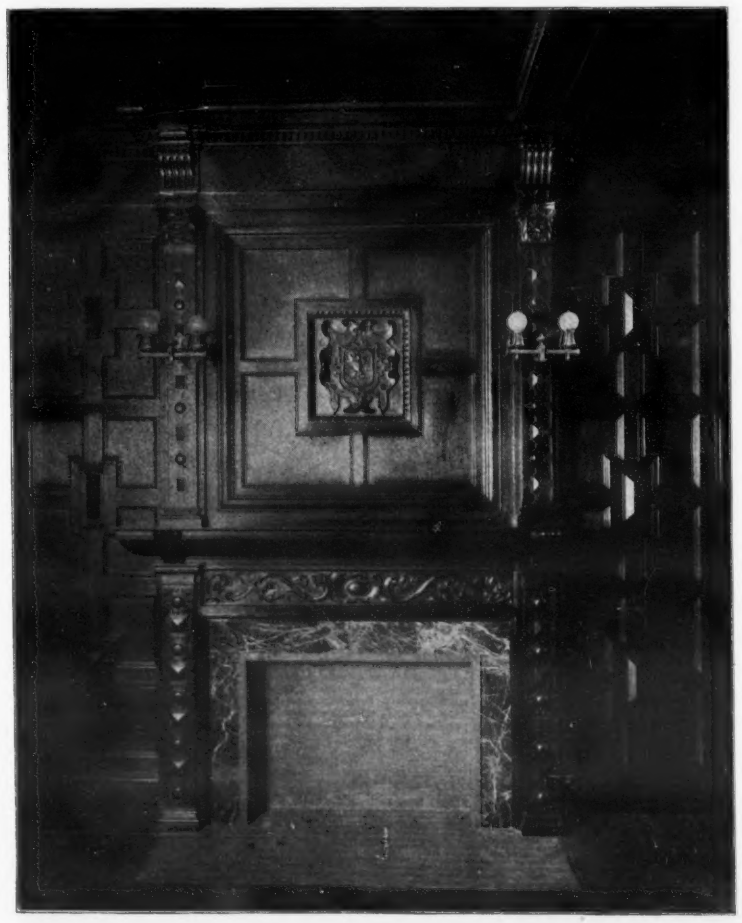
VIEW IN FLEMISH RENAISSANCE ROOM.

LOUIS W. SMETANA, DES. ST. LOUIS.

YELLOW PINE EXHIBIT BY SOUTHERN LUMBER MANUFACTURERS' ASSOCIATION, ST. LOUIS WORLD'S FAIR.

VIEW IN TYROLEAN RENAISSANCE ROOM.

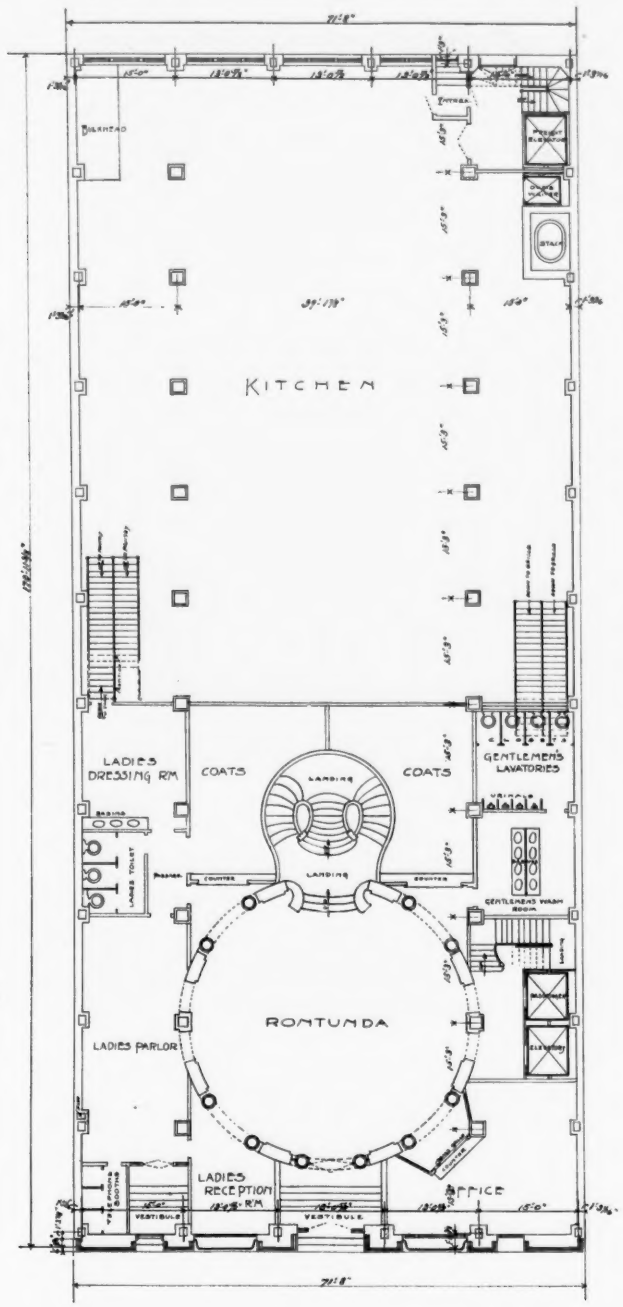
WINDOW SEAT, ENGLISH RENAISSANCE ROOM.



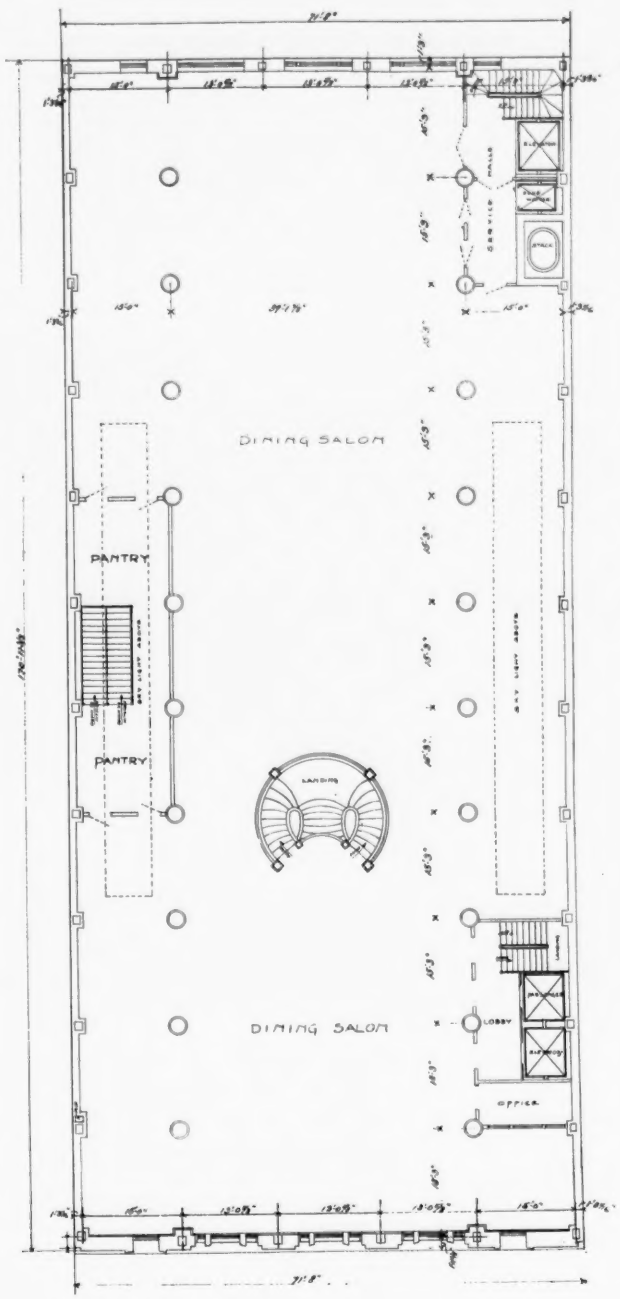
MANTEL IN ENGLISH RENAISSANCE ROOM.

LOUIS W. SMETANA, DES., ST. LOUIS.

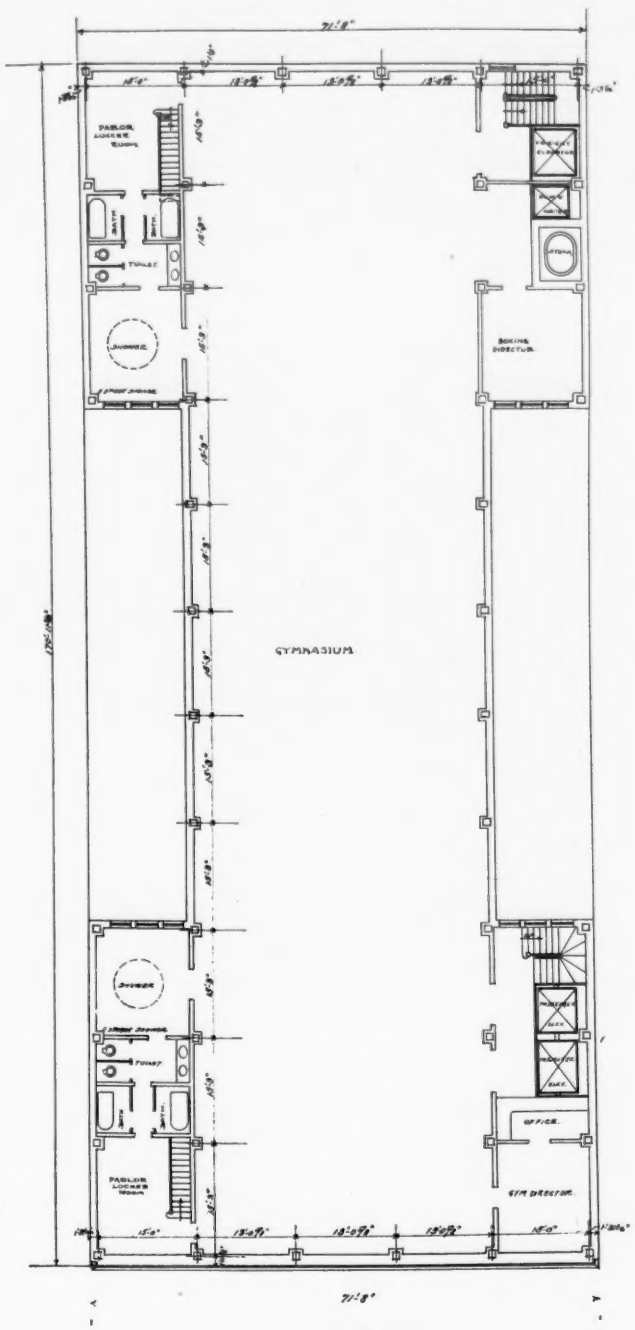
YELLOW PINE EXHIBIT, BY SOUTHERN LUMBER MANUFACTURER'S ASSOCIATION, ST. LOUIS WORLD'S FAIR



FIRST FLOOR



SECOND FLOOR



TENTH FLOOR PLAN

Scale 1/16"-1'0"

FLOOR PLANS NEW ILLINOIS ATHLETIC CLUB, CHICAGO.

BARNETT, HAYNES & BARNETT, ARCHITECTS.

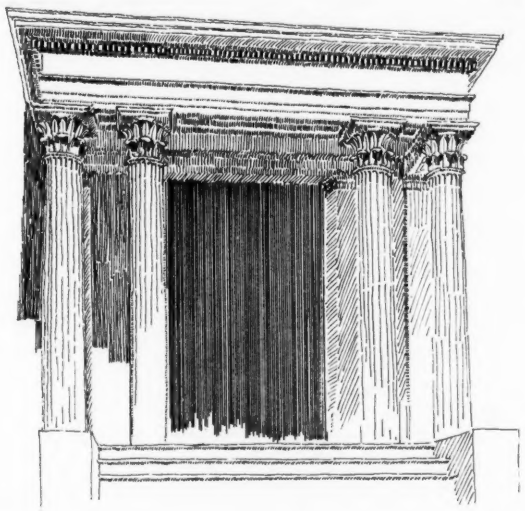
THE HALL BUILDING, HONOLULU, H. T.

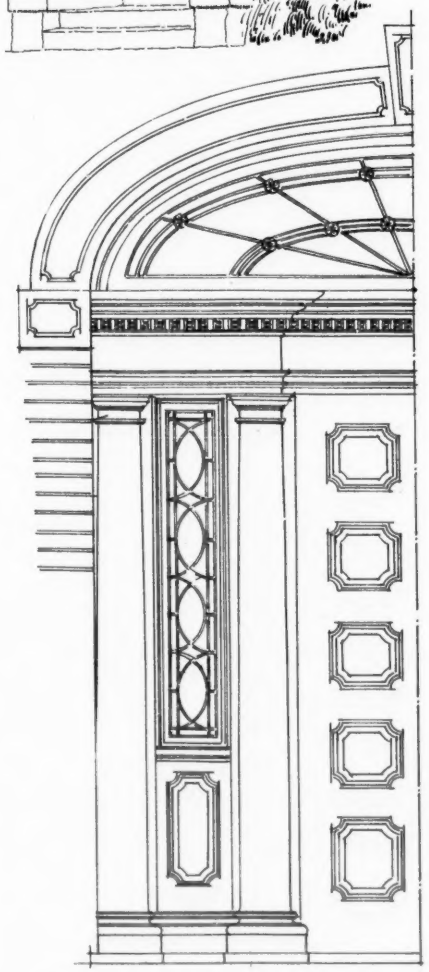
O. G. TRAPHAGEN, ARCHITECT.

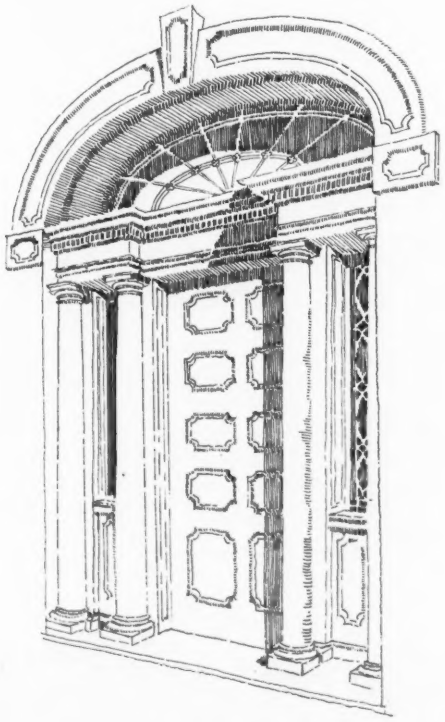
FRONT ELEVATION

MISSOURI STATE PENITENTIARY, JEFFERSON CITY, MO.

ECKEL & MANN, ARCHITECTS, ST. JOSEPH, MO.; MILLER & OPEL, ASSOCIATE ARCHITECTS, JEFFERSON CITY.



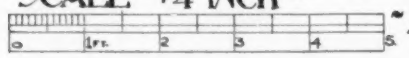




- DOORWAY - FOURTH & LAWRENCE STS -

- DOORWAY - BROADWAY ST -

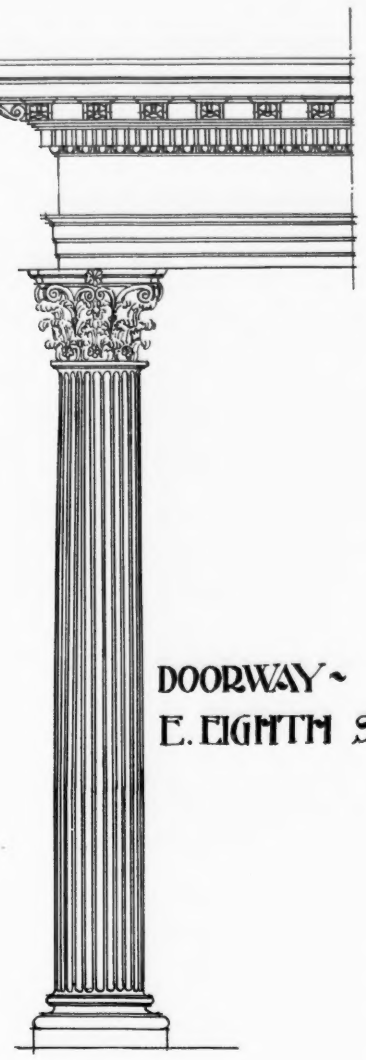
- SCALE 3/4 INCH -



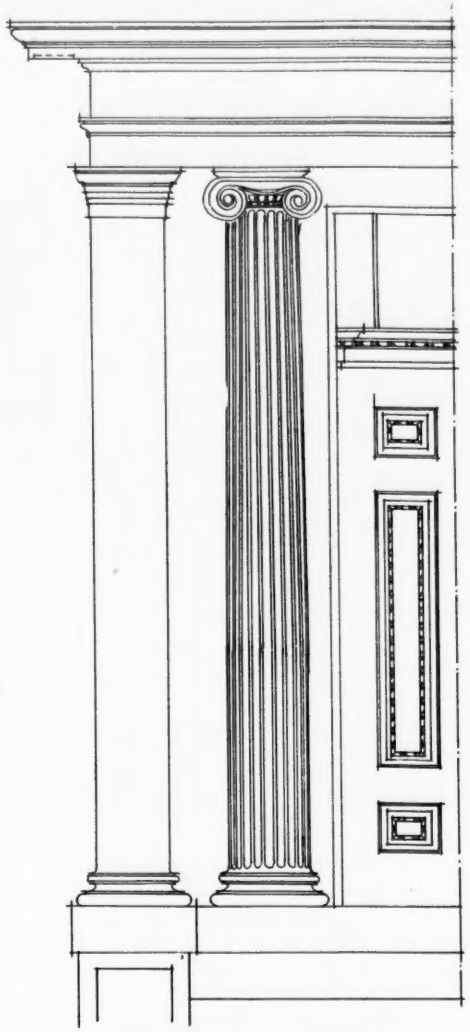
- DOORWAY - PENDLETON ST -

- OLD LOCAL COLONIAL WORK -

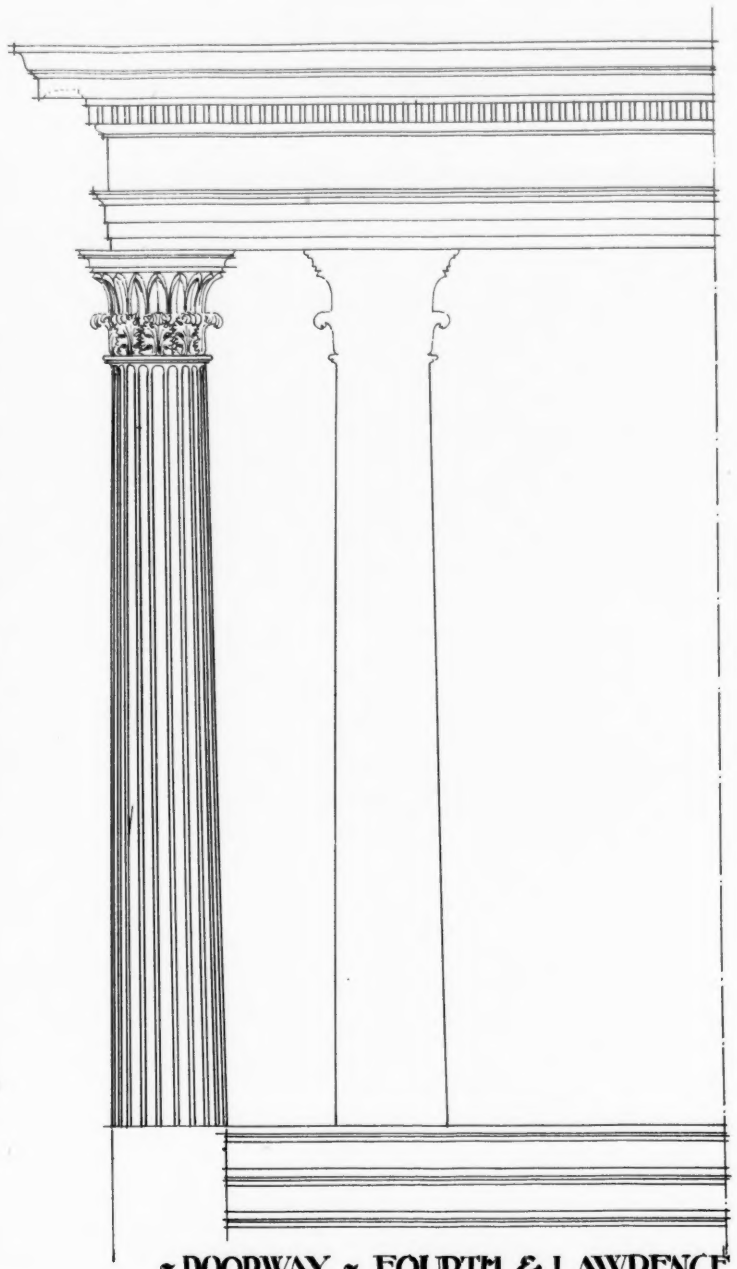
- MEASURED & DRAWN AUG 1904 BY - L. WILLEKE



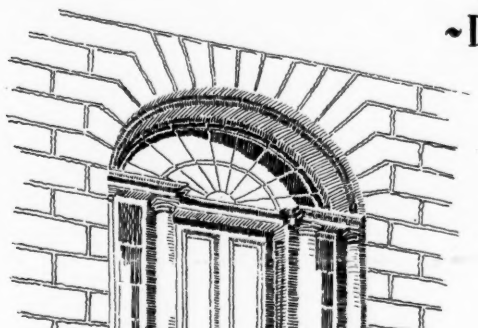
DOORWAY ~
E. EIGHTH ST ~

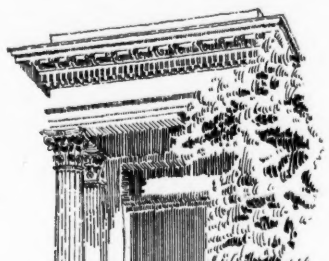


~ DOORWAY ~ SIXTH ST ~

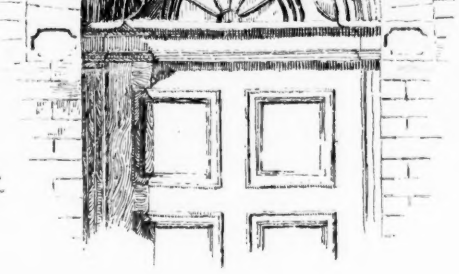


~ DOORWAY ~ FOURTH & LAWRENCE STS ~

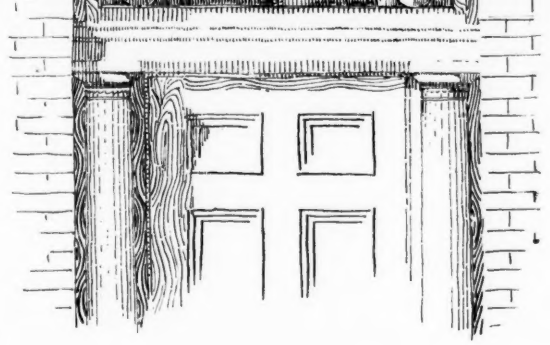




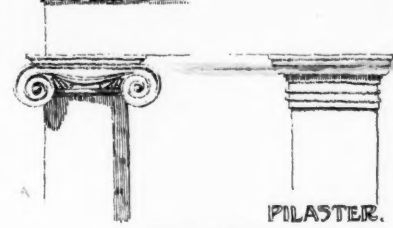
CORNICE EAST 8TH ST.



DOORWAY EAST 6TH ST.

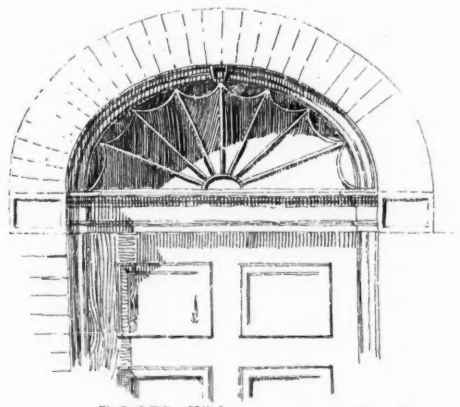


DOORWAY BROADWAY ST.

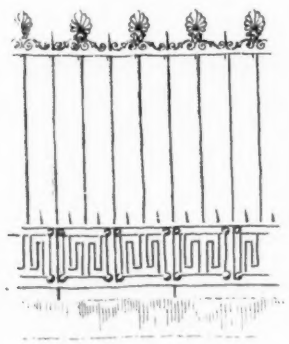


PILASTER.

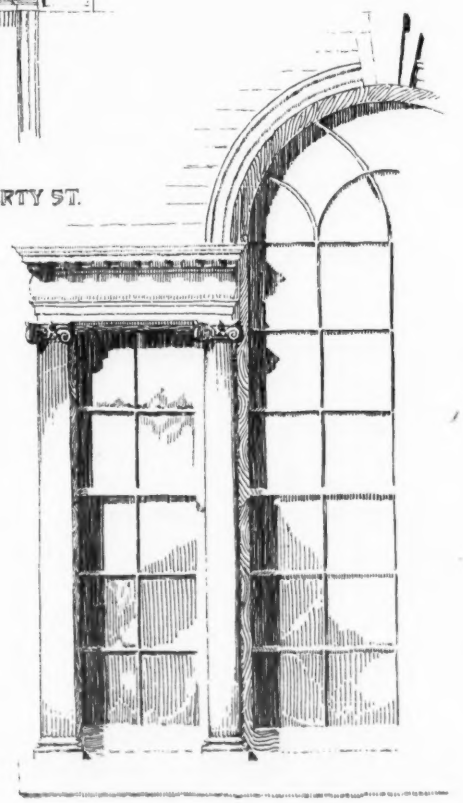
CORNICE EAST 5TH ST.



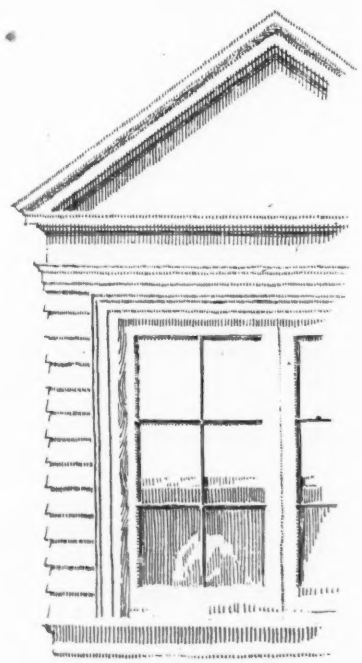
DOORWAY EAST LIBERTY ST.



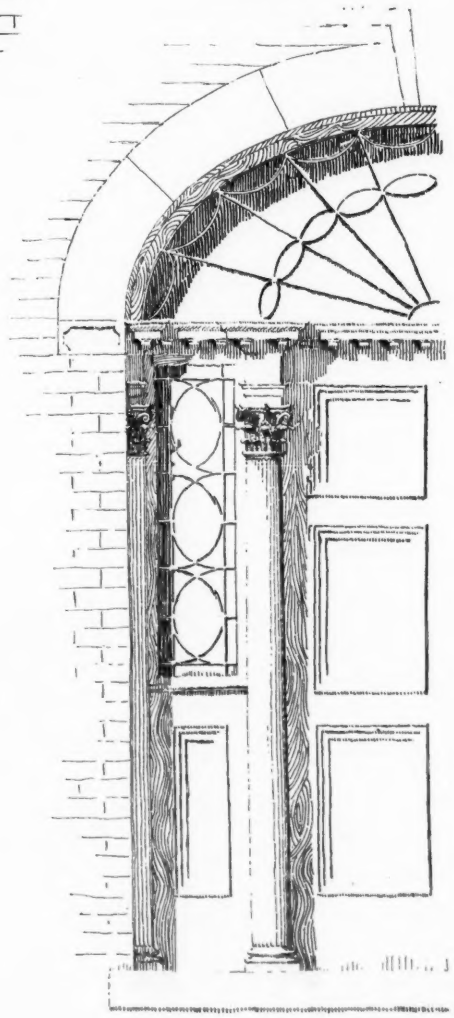
IRON FENCE, EAST SIXTH ST.



WINDOW MT. AUBURN

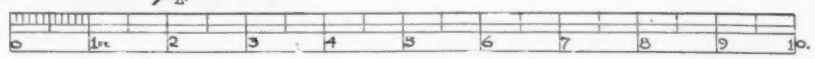


DORMER WINDOW MT. AUBURN.



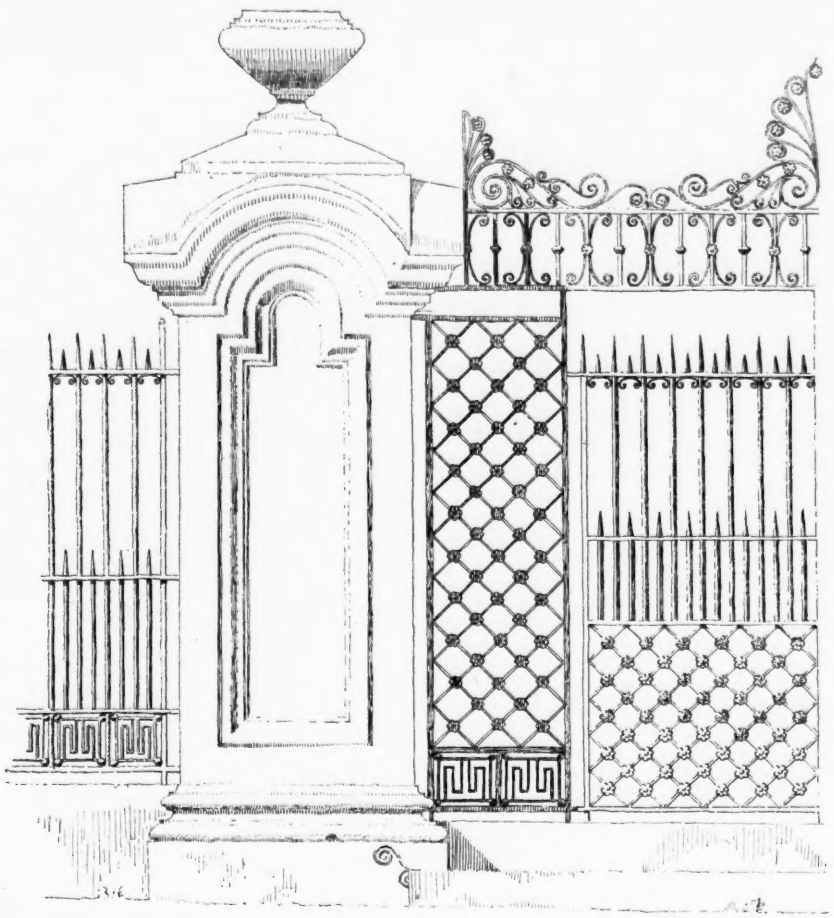
DOORWAY MT. AUBURN.

SKETCHES OF COLONIAL WORK,
CINCINNATI, O. SCALE 3/4 IN=1FT.

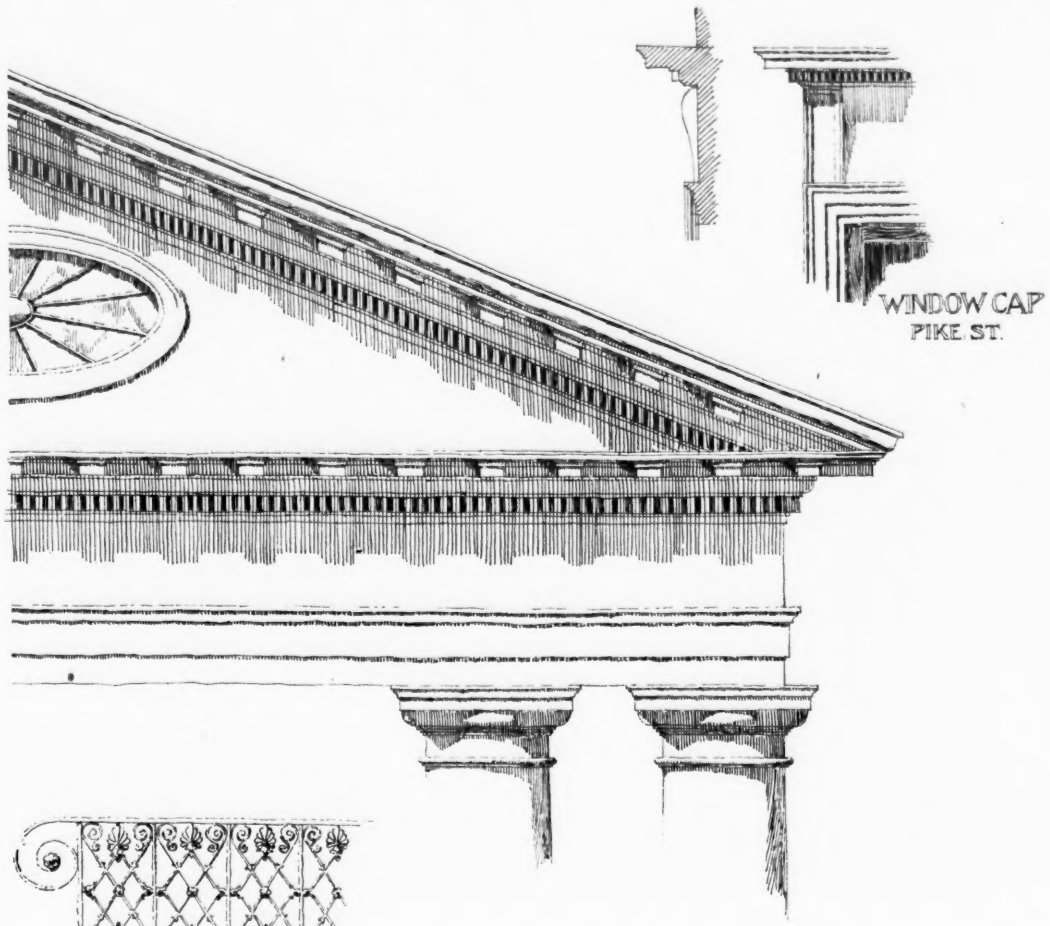


MEASURED & DRAWN BY L. WELLMAN

COMPETITION SKETCHES, CINCINNATI CHAPTER, AMERICAN INSTITUTE OF ARCHITECTS.

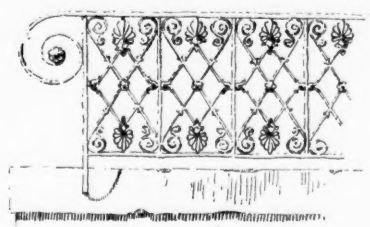


ENTRANCE GATEWAY PIKE ST.



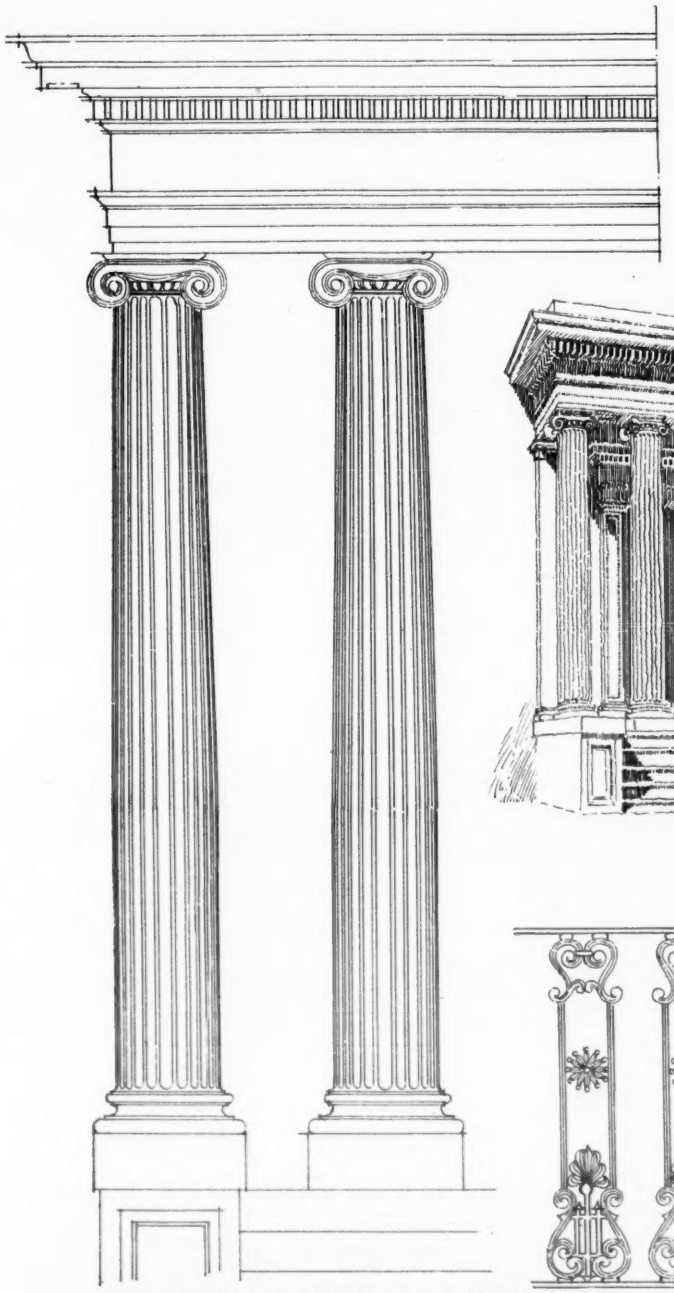
PORTICO. PIKE ST.

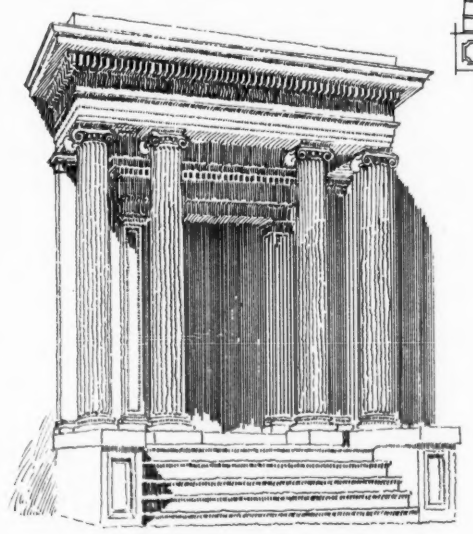
WINDOW CAP
PIKE ST.

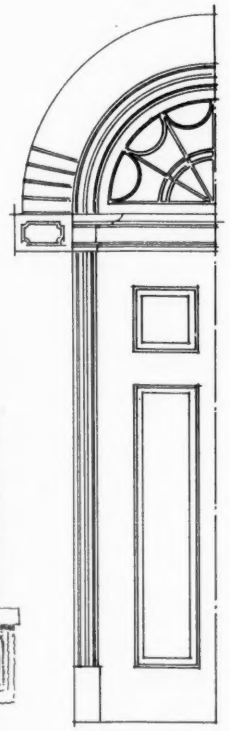


IRON RAILING

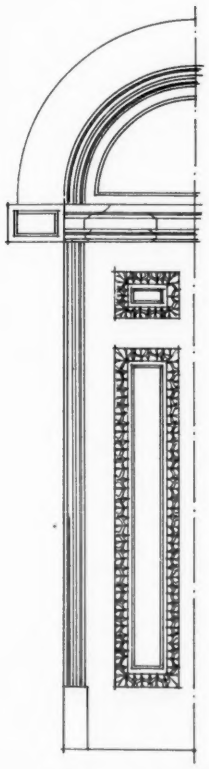
~DOORWAY~
~BROADWAY~ST~







~DOOR~SIXTH ST~



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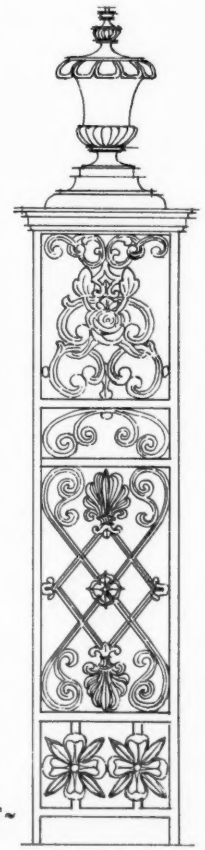
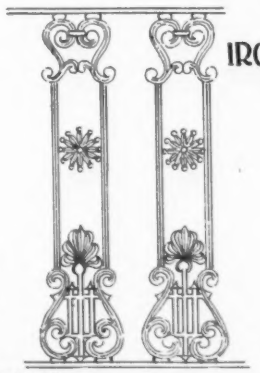


~IRON NEWEL~ PIKE ST~



IRON FENCE

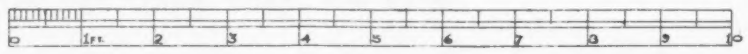
~DOORWAY~ FOURTH & LAWRENCE

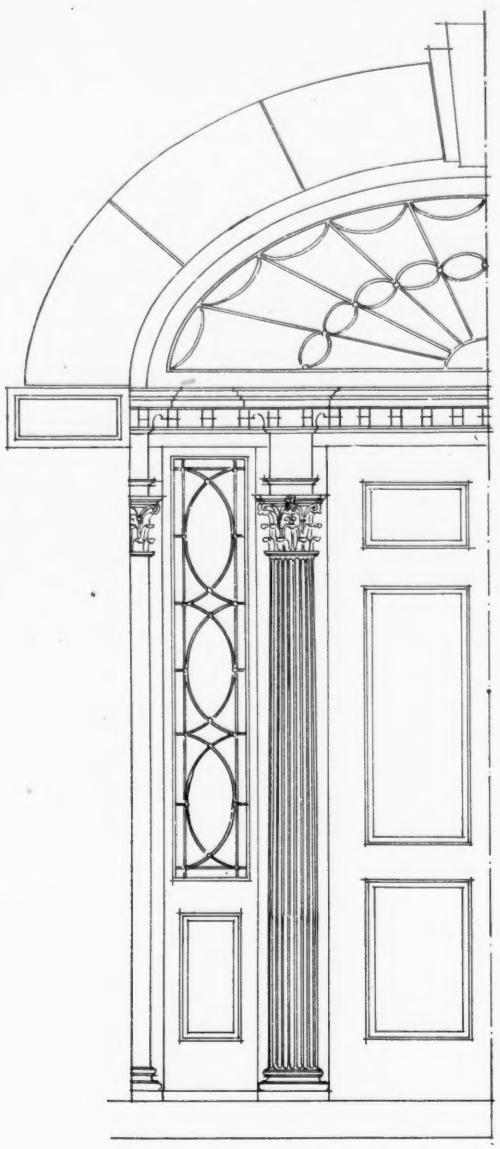
~OLD LOCAL COLONIAL WORK~

~MEASURED & DRAWN AUGUST 1904 BY L.WILLEKE

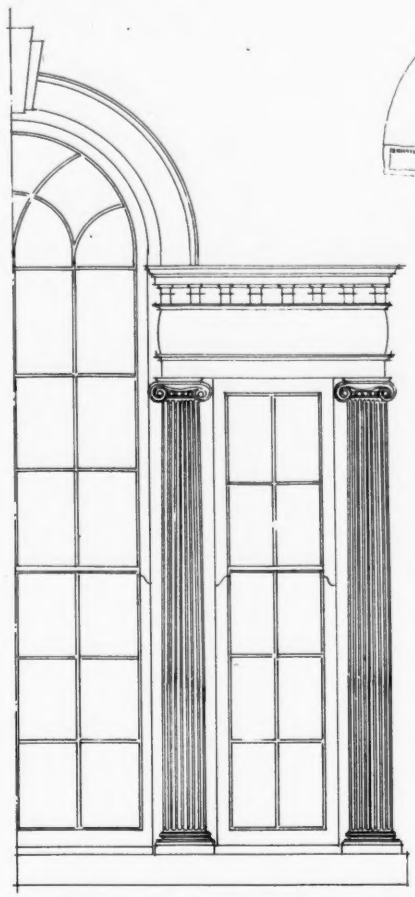
~SCALE FOR IRON DETAILS 1½ INCH ~

~SCALE FOR ALL OTHER WORK ¾ INCH~



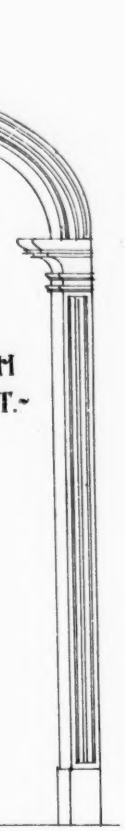


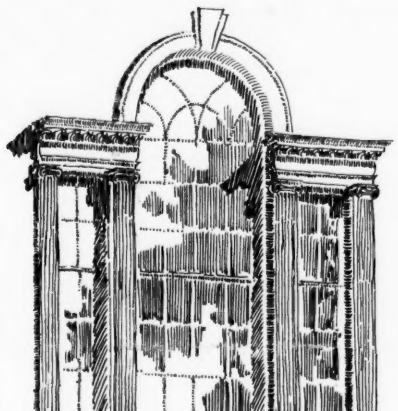
~DOORWAY~ McMILLAN & AUBURN AVE.~

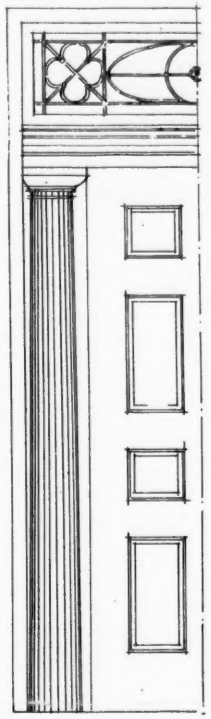


~WINDOW AT McMILLAN & AUBURN AVE.~

INTERIOR ARCH
~BROADWAY ST.~







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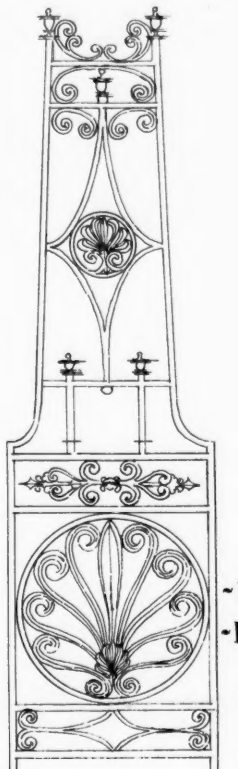
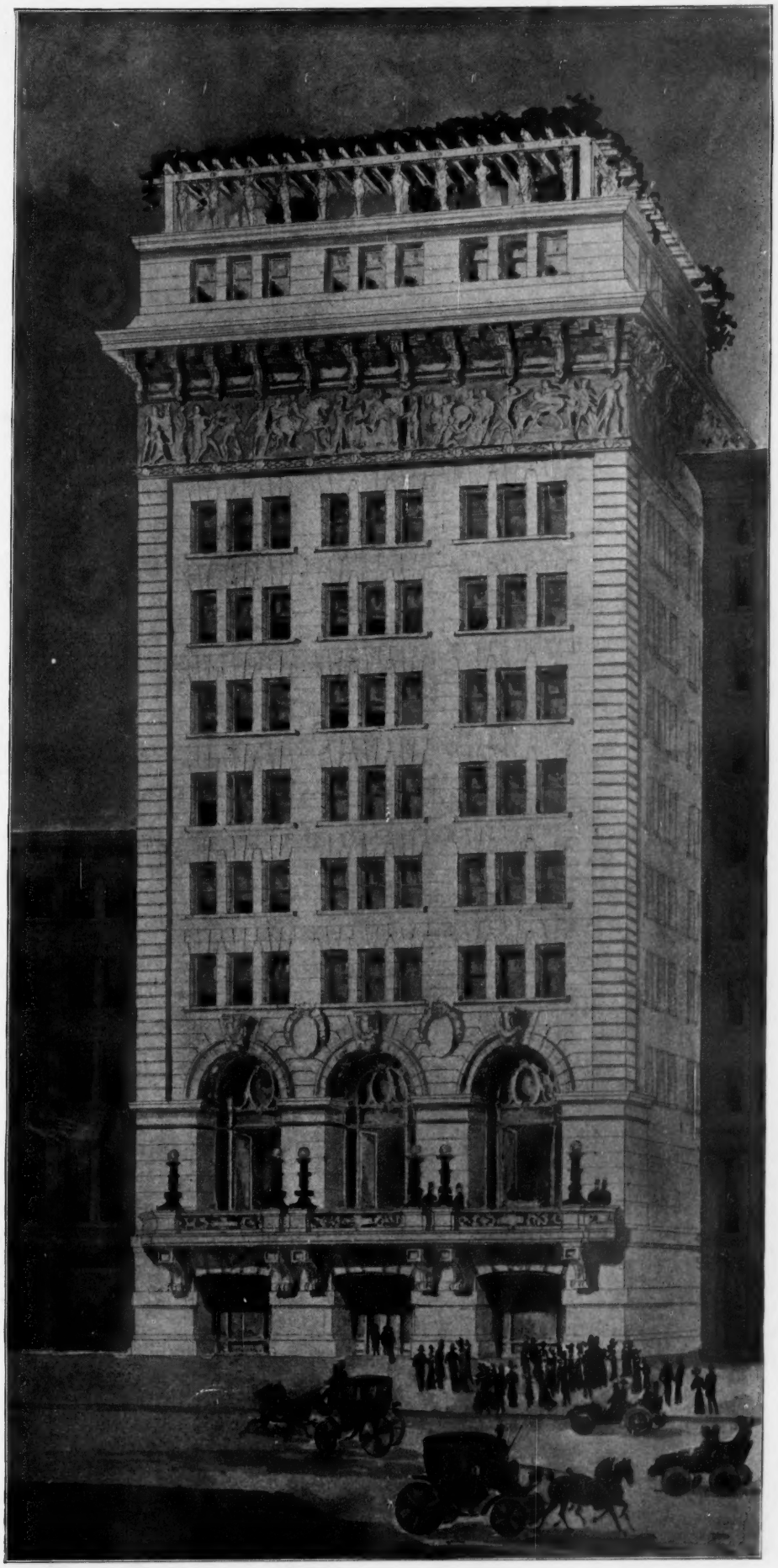


~IRON NEWEL~
~BROADWAY ST~



THE NEW ILLINOIS ATHLETIC CLUB, CHICAGO.

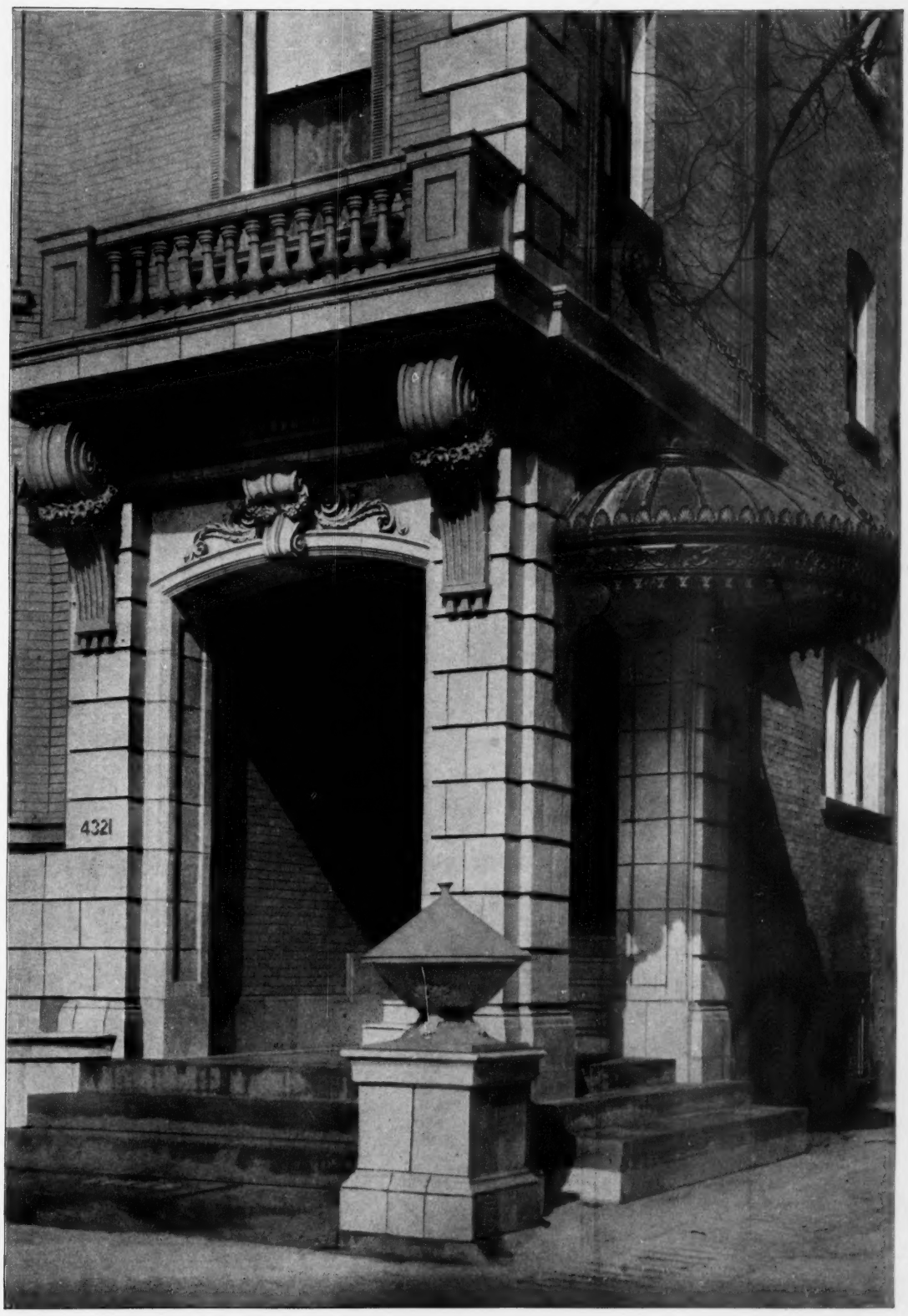
BARNETT, HAYNES & BARNETT, ARCHITECTS.

DETAIL VIEW, RESIDENCE OF F. E. FRENCH, EVANSTON, ILLS.

ERNEST A. MAYO, ARCHITECT, CHICAGO.

VIEW IN HALL, RESIDENCE OF F. E. FRENCH, EVANSTON, ILLS.

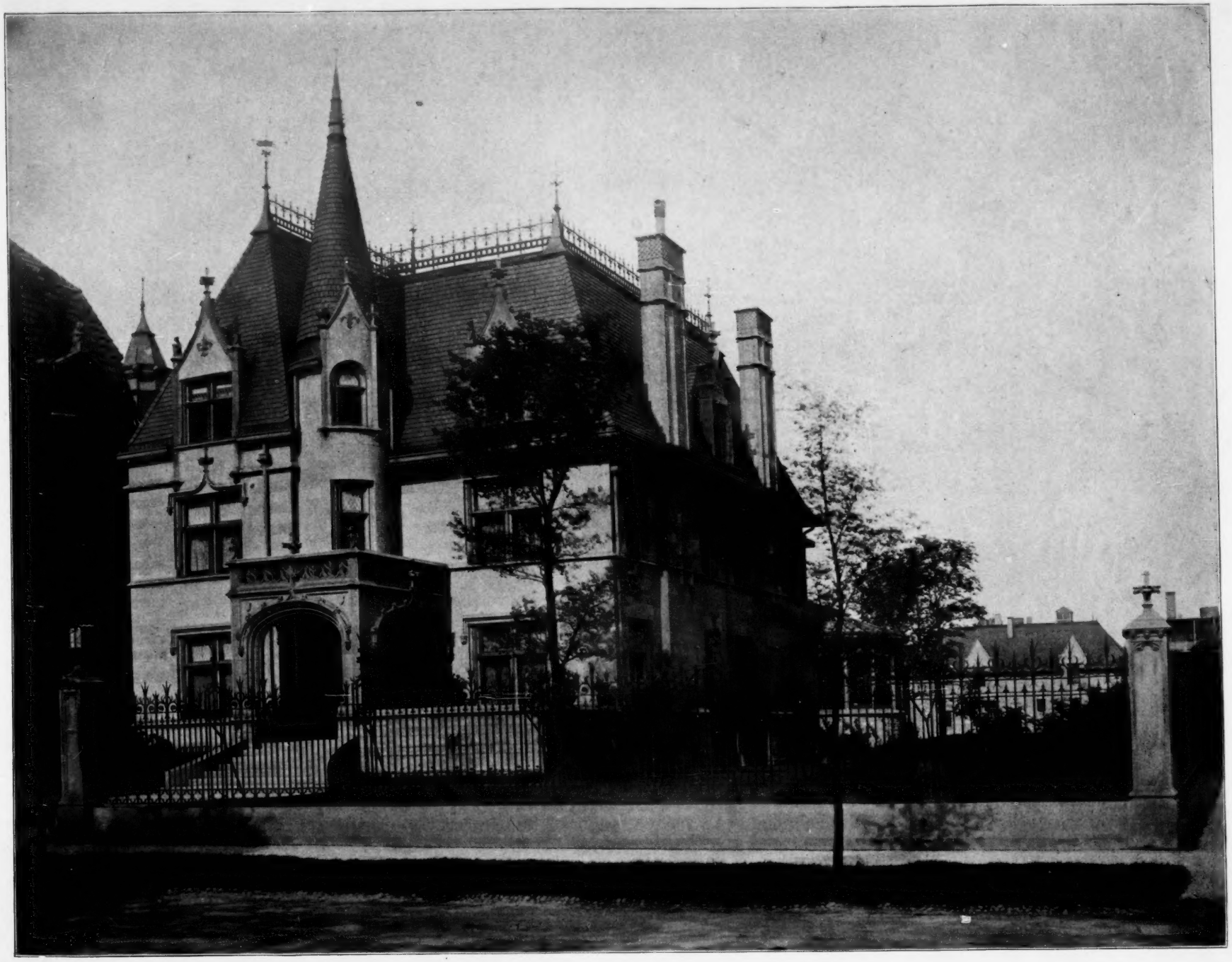
ERNEST A. MAYO, ARCHITECT, CHICAGO.



ENTRANCE DETAIL, RESIDENCE OF RAYMOND G. SYKES, CHICAGO.

ERNEST A. MAYO, ARCHITECT

H. R. WILSON, ARCHITECT.



RESIDENCE OF J. R. THOMPSON, CHICAGO.

H. R. WILSON, ARCHITECT.

BREAKFAST ROOM, RESIDENCE OF J. R. THOMPSON, CHICAGO.

H. R. WILSON, ARCHITECT.

VIEW IN DINING ROOM, RESIDENCE OF THOMAS MORRISON, PITTSBURG, PA.

F. J. OSTERLING, ARCHITECT.

VIEW IN DINING ROOM, RESIDENCE OF D. O. HILL, CHICAGO.

FREDERICK W. PERKINS, ARCHITECT.

FINANCING BUILDING OPERATIONS.*

BY WILLIAM H. RUSSELL, ARCHITECT.

THE methods of financing building operations vary in different places. In New York many schemes have been adopted for a while to give place at length to other methods.

For example, when apartment houses were first introduced they became very popular. Then what was known as the co-operative apartment house scheme was invented. The promoters would get the refusal of a piece of land, have plans drawn and organize a company of people who wanted homes. The plan was to give the owner of a certain amount of stock a perpetual lease of an apartment (very similar to the custom in Venice of different floors in a building belonging to different owners). A great many large apartment houses were built on this scheme, but after one notable instance, in which the mortgage was foreclosed and the stockholders wiped out, this method was abandoned.

Formerly much of New York City was built on leasehold property, and many of the finest stores are on leased land, such as A. T. Stewart's (now John Wanamaker's), Tiffany & Company, Union Square, W. & J. Sloane, and others. But at the present time very little is loaned on leasehold, and it is almost impossible to finance a large proposition in New York, if the fee of the land is not included.

This is not the case in Chicago where many very large and high buildings are on leased ground.

Most of the dwellings in the large cities of the world have been built by operators building rows of similar houses and selling them separately. This form of operation appeals to a large number. Men of small capital can start in a small way and by investing their profits in more houses, often build whole neighborhoods. They are usually successful during rising markets. Of course houses reproduced a number of times can be built much more cheaply than separate houses.

Their plan of finance is often to employ an "architect" to make the plans of one house. A building loan is then procured, and the different sub-contractors are induced to wait for their final payments until some of the houses are sold.

But there are many builders who build very good houses to sell, in New York, and a large number of fireproof residences have been built and sold and not a few have brought between one hundred thousand and two hundred thousand dollars each in the last few years. There are very few private residences built at present on Manhattan Island, apartment houses being in vogue.

In the financing of a building operation the promoter has usually to provide the difference between the amount of money that can be borrowed on the enterprise and the cost of it. The permanent loan is usually made by a financial institution on a conservative basis, loaning only 50 per cent or 60 per cent of the value of the enterprise at a low rate of interest. If the conservative institutions decide for certain reasons not to loan money, there is very little promoting done until they wish to again loan. Of course there is a great deal of money loaned by private individuals but their loans are generally of smaller amounts.

There are institutions which make a business of loaning and selling the mortgages to private individuals. Thus the financial institutions have the first claim on most enterprises. They decide whether there will be an active business or not. If they are desirous of loaning there are always operators who are anxious to promote enterprises.

As the size of operations in this country has increased to such enormous proportions, so have construction companies, promoting companies, and realty companies been formed with very large capital. Some of these have increased their scope until now they will underwrite the mortgage, assist in financing the whole operation and build the building. This class of operation is almost exclusively confined to central and staple property.

A popular mode of procedure for men who wish to operate in real estate, is to form a company, usually called a realty company, and for each particular building operation a subsidiary company is formed by the parent company. This method, under the laws of the State of New York, eliminates the element of personal liability of the stockholders.

There is a large field for these realty companies, managed on conservative lines, and they are of great advantage to people who are forced to improve their property. It may be that their buildings are too poor to compete with new neighbors or too old, or that they have been destroyed by fire. For example, a man has a piece of property in a business center which he is forced to sell or improve and which is appraised at say $1,000,000; it does not carry itself and there is not a ready sale for it at that price. A realty company might make the following proposition viz.: To erect on it a building costing, say $1,000,000, to pay him for his land $600,000 in cash and $400,000 in second mortgage bonds of the company. The realty company would borrow from a financial institution, say $600,000 on the land, and say $500,000 on the building, as it progresses. After paying the owner $600,000 they would have $500,000 in cash for the building, and the stockholders would have to put in the balance, $500,000 and own the equity. In some instances the company issues no second mortgage bonds but only stock.

There are many men who are forced to sell or improve their property, and while they have not the means to improve it themselves, they would prefer to keep an interest in it to selling it altogether, and they also feel that the experts in the realty company know better than they what the nature of the improvement should be. Perhaps the owners are not in this country, or perhaps they are not in a position to wish to take much trouble in posting themselves as to the requirements.

Some propositions like the above, in which they retain stock naturally appeals to them. Of course if the realty company puts in very little cash, it may prove a poor operation for the owner of the land, and he is taking most of the risk and had better get most of the profits.

The financing of large building operations has been tried on very much the same lines as railroads are financed, that is, issuing bonds and stock in shares of, say $100 each. Also large operations have been put through in Boston, I am told, by selling only stock in small shares without the property being bonded, and again other large operations have been successfully carried out by selling first mortgage bonds in small amounts. The stock in such an instance representing no payment in cash, but professing to represent the earning power over expenses.

These plans have not been popular in New York.

Real estate has increased so much in value in large cities that it would not be possible for most men to invest in it if it were not through these companies. While formerly, only the rich were able to participate in large enterprises, now, through the larger corporations, the people can be interested in all the great enterprises of the country.

Building loan corporations in great numbers have been started for persons who wished to build homes. Under their plan, the tenant gets the property upon the payment of a very small equity. He then in lieu of rent may pay off each month a small portion of the mortgage, in addition to the carrying charges.

The questions, How much will a building cost? And, When will it be finished? are of the greatest importance to the financier. These questions depend largely on the labor conditions, on which subject the architect and his client, the owner, are not usually given a chance to be heard, although the owner is the greatest sufferer from strikes and lockouts. His interest account is going on all the while and he has very much more at stake than the builder.

A company that could give a good guarantee to finish a building at a certain time for a certain amount of money, would indeed greatly facilitate any building operation. Let us hope that this may soon be the case.

It is not the province of the architect to formulate the financial scheme or to place the securities of the project. He may be called upon to design a new building, introducing features which will make it superior to its competitors. He is usually expected to prepare preliminary plans, specifications and to give an estimate of cost of building, carrying charges and operating expenses in the shortest possible time. He should be familiar with all the requirements of the building he is called upon to

* Paper read by William H. Russell at the 38th Annual Convention of American Institute of Architects at Washington, D. C. Revised by the author for THE INLAND ARCHITECT.

design. He should theoretically not put anything in that is not of use. He should at the same time make his building pleasing to the public, without adding unnecessarily to the cost.

Assume, for instance, that it is proposed to finance the construction of a high office building in some great center. To ensure a good income the requirements, above the first or second story, would probably be to have as many windows as possible, not too large to be easily operated, and yet as large as practicable.

Each window should be separated from each other window, preferably by masonry, as it is advisable to have as little steel as possible exposed to the elements, but steel thoroughly covered with cement masonry is supposed not to deteriorate.

Projections over adjoining property should be dispensed with, to avoid legal complications. Many title guarantee companies discriminate against such encroachments. A large cornice is a disadvantage to windows under it.

Therefore the requirements which confront the architect, are a flat wall pierced with windows at equal intervals, like a waffle iron, and not even relieved by a large projection.

Although this is a difficult proposition, it is certainly a very interesting one.

The high building is essentially American. It is a new proposition and requires more originality to solve than a problem where some historic example from the old world may be taken as a proto-type.

Would it not seem as if these requirements might best be met by the clever application of colors? If some one could use bright colored terra cotta for example, omitting large projections, but with a handsome sky line, make a beautiful building, he would indeed deserve the thanks of the community. For the skyscraper has come to stay, and the business centers of our large cities will be rebuilt.

The Egyptian, Greek, Roman, Romanesque and Gothic architects all felt the want of color and used it, and although color had perhaps better not be suggested by an architect until he is quite sure that he will be employed, it seems to be a subject for serious consideration.

It is of the greatest importance to have the description of a proposition as brief as possible, but covering all the points. A resumé of the specification is of great benefit. Use if possible the uniform contract. I have never had any trouble from it, but with contracts furnished by owners I have had a great deal of trouble. In one case we could not interpret a contract. Our counsel was also unable, and the man who wrote it was asked to interpret it, which he did, but fortunately he saved the situation by reversing his interpretation when the contractor threatened suit.

People seem to hate to read detail specifications and voluminous contracts, and I believe that they are very rarely read through by any one. The simpler the proposition and the simpler the plan, the simpler the description and the simpler the contract, the better.

The Dutch government has decided to invite each of the powers who have signed The Hague arbitration agreement to choose two architects who will compete for the construction of the peace palace offered by Andrew Carnegie. The ground for this building will cost about $160,000, or, at least, this is the sum mentioned in the bill asking for the appropriation of money to buy the land. A central European committee will be appointed to provide rules and regulations, etc., for the competition which will be conducted, it is said, on the model of that appointed to control the Phoebe Hearst university of California competition.

The city of Detroit, Mich., is proceeding in an intelligent manner with a scheme by which it is proposed to make that city one of the most attractive in America. It will not proceed in the planless and haphazard manner so often characteristic of the prosecution of great public improvements. The city has shown the same intelligence which would be exercised by a private corporation desirous of bringing about similar results. It has employed an expert in the person of Charles Mulford Robinson of Rochester, who will make a written report on the best method of improving the city.

THE RELATION OF THE ENGINEER TO THE ARCHITECT.*

BY CORYDON T. PURDY, C. E.

THE advent of the rolled beam has wrought a new era in works, it is being evolved in our own times; and we have architecture. This era is contemporaneous with our own not yet adjusted ourselves to it, not even we here in America. This does not mean that there were no structural problems before our day, but rather that the use of steel has brought with it structural possibilities, indefinitely greater than anything that preceded, so that it practically constitutes a new age in building construction. Many of the great designers of the middle ages, must also have been great engineers. Their command of geometric functions may have been as great as ours. From a structural standpoint, their work will always remain notable—some of it remarkable—and the new era does not signify that we know more than they did, but that we now have a material for our buildings that admits of forms of construction of which those masters could not have dreamed.

The characteristic features of this new era are the substitution of the steel frame for the heavy masonry walls of massive construction, great height of buildings, larger openings in walls, wider spans in rooms, magnified requirements for ventilation and sanitation, electric light and power, the modern elevator, and the great multiplicity of structural and mechanical problems which these things involve. These characteristics do not pertain directly to the utility of the building nor to its artistic treatment, but to structural conditions involving technical education and experience. This is true, though the increased height of buildings and the greater openings in exterior walls may call for a modification in the artistic treatment, and though the problems of utility may have been almost immeasurably magnified.

This new era, with its new conditions, partially explains why the engineer has suddenly, as it were, become a distinct factor in the building problem. It is because of this enormous expansion of problems involving technical knowledge. The other reason is not far to find; it is because the methods of treating these problems have been elaborated during the last century, and particularly during the last thirty years, upon a basis which affords much more accurate and more definite results than anything, so far as we know, in use before the present time.

While some of the vaulted ceilings and domes of the old world make men wonder how the designers calculated so closely and did their work so well, it is undoubtedly true that a large part of even the best buildings constructed prior to the advent of steel, were dimensioned and fixed structurally, upon the basis of experience and precedent. Every new building called for careful comparisons and the judgment of the most experienced persons. The actual calculation of stresses and strains was unknown. Now this is changed. The rule is the other way in every up-to-date architect's office. The dimensions and sizes of all details of construction, as well as the mechanical features of a modern building are calculated, accurate and definite results are sought, and we pay less and less heed to what the dimensions and sizes of the same details were, in comparison, in other buildings. We lean on our computations, and not on precedent. Judgment is not eliminated, but in a large measure it is transferred, and the experience required is the experience of the technical man rather than that of the observer.

To put it briefly, structural and mechanical problems in building work were comparatively few in number in all times preceding the advent of rolled beams, while accurate and definite methods of treating such problems, particularly those involving the strength of materials were at least relatively crude and unsatisfactory and electrical problems were entirely unknown. In these days such problems fairly burden every design, and they are susceptible of definite calculation and accurate determination. Unless we get this point of view, we shall scarcely be able to appreciate what an evolution is really going on at the present time in the relation of the architect to his work and in the operations of his office or to realize that these changing processes are not yet completed. Attention is called to this, in the begin-

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* Paper read at the 38th Annual Convention of the American Institute of Architects at Washington, D. C. Revised by the author for THE INLAND ARCHITECT.

ning, because we cannot determine what relation the engineer can most profitably hold to the building problem and to the architect, unless we approach the question with the largest possible conception of these new conditions which the construction of modern buildings has wrought in architectural methods and requirements.

The engineering profession, as a profession, is comparatively a new thing. Compared with that of the architect, it is really in its infancy. The employment of architects, their work as designers, and their supervision of construction are fixed things the world over; their place in the business world, and even their standard rate of compensation is universally conceded. With an engineer it is entirely different; he has been struggling, particularly during the last generation, for an acknowledged place as a professional man, and for a like independence. This is really true in every department of engineering. The business world in these later years has finally come to recognize him as a man of some importance, but it still expects him to work on a salary, unless he is able by some means to maintain himself independently, and this seems to be as true of the man who builds a transcontinental railroad or tunnels a mountain as it is of the youngster that works over a drafting-board.

When it comes to the engineer working on architectural problems the commentary is doubly true, for it is practically a new field for technical effort. The engineers taking up this work, and their number is constantly increasing, appreciate these conditions. We shall see during the next generation, however, that they are a strong body of men, also, that they are ambitious, and that they will unquestionably aspire to any authority or position which circumstances may open to them. It may, therefore, be confidently predicted that any practice by the architectural profession which fails to appreciate these men at their real worth, and the rapid development of the engineering profession as a whole, will, ultimately, come to naught. If a relation is ever established between the engineer and the architect, which will be conceded to be the proper one by both professions and by the public, we may fairly expect that relation to be one which will work for the advantage of all concerned—the architect, the engineer, and the owner.

Ten years ago, when the writer moved his office to New York, he was told that there was no chance for an engineer in that city, that excepting a few who regularly employed engineers in their office force, the architects depended upon one of three or four of the great iron manufacturers of New York for their steel designing, and that that arrangement was a fixed one in the architectural practice of the city. He was told that the custom was so thoroughly established that it could not be disturbed. The office was, nevertheless, started in the belief that such a custom would go to pieces of its own accord. In a very large degree this has already happened, and it is a fair illustration of what will eventually happen to every relation between the men that is not reasonably considerate of all interests concerned.

The structural engineer ordinarily includes in his part of the work, the structural frame-work of the building, be it much or little, the foundations, and also the masonry whenever it becomes complicated or questions of strength are involved. This part of the designing of a building can be accomplished in several different ways.

1. The architect may do the work himself, without assistance.
2. The architect may have the work done by some manufacturer.
3. The architect may have the work done by the builder, or the owner, with his consent, may have it done in that way.
4. The architect may employ the engineer as a part of his own force.
5. The architect may associate the engineer with himself as a partner.
6. The architect may employ a consulting engineer, who has his own independent office and practice.
7. The architect may be associated with such an engineer, employed directly by the owner, without any personal arrangement with him in relation to the matter, or
8. The engineer may have control of all the work, with the architect more or less subordinated to him.

All of these methods of getting the work done are in vogue at the present time. It is a wide divergence of practice and certainly a very undesirable condition of affairs. With engineers in other departments, particularly in electrical work and heating and ventilating, the practice is more uniform, but not sufficiently so.

The responsibility rests chiefly with the architect. Where the work has been done by men in the employ of the manufacturer or builder, in many cases it has been so because they wanted it, and when they have been employed by the owners, it has usually been because the owners required it; but outside of these influences, the architects have been in control of the work. They have decided how it should be done and the engineer could do nothing but acquiesce in his wishes.

This wide divergence of action has, first of all, grown out of the varying conditions among the architects, themselves. Some have technical training, and their best work pertains to the structural part of their problems, while others, and among them some of the best designers, have little or no taste for construction. Some architects can afford to give their own time to structural details, when it would be folly for others to do so. Some architects have a business sufficiently large to warrant the expense of regularly employing competent men in their own offices, while others cannot afford such an expense. In some cases the cost of the best technical assistance is unhesitatingly met by owners, while other work is done under circumstances which makes the employment of engineers almost prohibitive.

To some extent, this difference in practice has grown out of a fear of trusting to outside help. Some architects have been willing to try it, while others have not. The fear has been twofold, that the work would not be done well, and that the building could not be designed to advantage unless the work was all kept together. Sometimes it has been the former, sometimes the latter, and occasionally it has been a dread in both directions.

The divergence of practice is also due to a failure to appreciate good work. The great structures of our cities vary in strength and stability, and in every other structural characteristic, from the wretchedly poor to the wastefully good. The engineer is not to blame, he does the best he can, but he is to blame who chooses an inexperienced or incompetent man for important work. It is a fact that young men not long out of school and men whose technical knowledge is very limited are employed in offices to do work for which they could not be considered qualified, in any of the leading engineers' offices of the country. They fail to do the wise thing. They can't help it. Sometimes the result is lacking in some essential feature and sometimes it is only the lesser evil of extravagance; but whether it is the one or the other, ordinarily, both the architect and the owner fail to realize its imperfections. It is only now and then, when such structures come under some extraordinary test, that the weakness becomes apparent.

There remains, however, another explanation of this divergence, a more important one perhaps than all the others put together, and that is the cost. Undoubtedly, this is often the reason why inexperienced or incompetent men are employed. The question is asked too often, "How can we get the work done at the least expense," and there are not a few extreme cases on record where the architect has tried to employ a consulting engineer by taking bids to see who would do the work for the least money. The results produced by such means are, to say the least, very unsatisfactory, and words can hardly tell how discouraging and humiliating it is to the competent engineer who is trying to do good work.

Some of the ways in which structural designing is now being done ought to be ruled out altogether, and this is particularly true of the one already referred to as the common practice in New York ten years ago. The day is coming when no architect who values his reputation will venture to receive assistance from a manufacturer or his employees, whether that assistance is paid for in a regular way or not. It might also be added that the day is coming when no engineer regularly employed by a manufacturer, or practicing as such himself, will expect to be called on for such services. It is an old saying that, "No man can serve two masters," and it is because this is true that this relation, sooner or later, is certain to disappear; in many cases it works to the owners' distinct disadvantage.

The steel frames in some of the most notable buildings, both of the East and the West, have been designed by the builder or

under his immediate direction. This is particularly true of some of the first high buildings. The builders' confidence in the practicability of the new methods of construction, and his willingness to share in the responsibility of their introduction, made that way of doing the work acceptable and pardonable when these first buildings were erected. The same method, however, has been followed on other important buildings during later years. Its continuance is partially due to the existence of the precedent and partially to the influence of the realty element which has recently taken so large a hold of the building business of the country. It is, however, an undersirable relation, from the architect's point of view, and that is sufficient to prevent its general adoption.

The employment of engineers by an architect as a part of his own force is also open to at least two serious objections, particularly when it is done in an office of moderate size. The character of the work which is ordinarily produced under such circumstances is not likely to be of a high order. The other objection comes from the other point of view. The subordinate and limited character of the service ordinarily required in such cases is certain to be distasteful and not acceptable to the most competent engineers. For these two reasons it is a method that probably will not be permanently maintained. The structural and mechanical problems in any office, be it large or small, are likely at any time to require the services of men whose training and ability will compare favorably with that of the architect himself, or to put it another way, these problems may at any time become the most important problems connected with the architect's business. The day is already dawning when the owner is going to appreciate this fact and is going to require the same ability and the same experience in those departments that he expects to get from his architect in other ways. When that day fully comes, this method of handling these problems, in all, except possibly the very largest offices, must disappear. Indeed as rapidly as architects come to appreciate the importance of good structural designing, they will themselves be dissatisfied unless they can have the very best, and it will be almost impossible for them to get the best from a salaried man without a greater expense than they can afford. Even in the largest offices it will eventually prove difficult to keep the service to a high standard without occasionally varying the practice or making changes in the personnel of the department. This is possible, because no man working under a salary will maintain as high a standard of efficiency as he would maintain if he were working for himself. There are few exceptions. It is human nature. Moreover, all men are prone to work in ruts and to repeat their faults. If an architect is constantly dependent upon one or two men in his own office, there is no getting out of these ruts or escaping from these faults, unless it be by occasionally changing the method of having the work done, or by changing the employees themselves. One of the leading engineers of the country, in speaking of this matter recently said, "The consulting engineer, in general practice, may be expected not only to have better and more adequate facilities, in the way of technical assistants, for doing a given piece of work, but he can also bring to bear upon this work a much greater amount of experience and knowledge derived from the greater number and variety of cases handled through his office." He also added, "I have had occasion to note several times the limited scope of the knowledge and experience of the technical assistants employed on salary by the architects and contractors."

The employment of the engineer by the owner as the associate of the architect or in general charge of the work, is also undesirable; as an associate it divides responsibility, in charge of the work it subordinates all other considerations to the structural. Eventually, it would be humiliating to the architect. It does not conserve the best interests of either the owner or the architect. Both arrangements are a mistake, and neither can attain a general acceptance, in or out of professional circles.

On the other hand, consideration of such a plan cannot be turned away lightly. If some solution of this difficulty is not found, if some systematic effort is not made to "standarize" this relation, if such an expression may be used, the engineer will strive to push himself forward in just such ways as these, and will meet with encouragement from the public. An opportunity to take the lead appeals to his ambition. He is almost always a practical man of affairs. On these accounts, if the situation is allowed to drift, it may never be possible to arrive at an understanding between the two professions for a uniform practice and a division of authority which may in time become fixed by public usage. And this is not an abstract theory. A good illustration of both arrangements has come to the writer's attention while these words are being written. In one case the owner of a fifteen-story building employed the engineer to design the steel construction of the building without reference to the architects. In the other case, a power house was designed by the engineers and no architect was employed until the services of one became absolutely necessary and then only to serve in a subordinate relation.

Objections are also repeatedly made to the employment of a consulting engineer. It is urged that the dividing of the work is a disadvantage to the architect, and that it obstructs and delays the men employed in the architect's office on other features of the design. The desire to keep the work under personal control is usually due to this notion; but sometimes it is due to a feeling of satisfaction in doing everything one's self, and occasionally it is born of the wish to monopolize the credit of every achievement with which one has to do. These ideas and desires are not only in the larger offices, where the volume of business is sufficient to warrant their gratification, but architects having smaller practices are governed by the same ideas. A much greater difficulty, however, is the question of compensation, to which reference has already been made. It always seems a hard thing to spend so large a part of the architect's commission in one sum.

These difficulties, and these only, seem to stand in the way of the employment of a consulting engineer. To all other relations there seems to be an objection which makes them impossible, an objection which will surely prevent their final acceptance by all concerned. It might, therefore, be well to inquire particularly into these difficulties which appear to stand in the way of the employment of the consulting engineer who has a practice of his own independent of the architect. Are the objections unsurmountable? Has the relation advantages of sufficient importance to warrant changing other methods which we are using in order to secure its adoption?

(To be Continued)

PROCEEDINGS, CONVENTION AMERICAN INSTITUTE OF ARCHITECTS.

AT the 38th annual convention at Washington, D. C., held Jan. 11, 12, 13, 1905, about sixty of the eighty delegates were present. The convention was called to order by President W. S. Eames. District Commissioner John Biddle delivered the address of welcome.

ADDRESS OF COLONEL BIDDLE.

"This is the second time I have had the honor of welcoming to Washington the American Institute of Architects.

"It would, therefore, seem natural to mention what progress had been made since two years ago toward the good to which we are conjointly striving—the beautification of this Capitol City.

"The relation of the architectural profession to the government is a question that claims this year much of your attention as appears from the papers for discussion at this convention.

"I do not, while this must be of interest to Washington, attempt to touch upon that important subject, but only to consider what has been done in the District of Columbia as to buildings and development.

"The new monumental railroad station, to be built of white Bethel granite, and facing a magnificent plaza with wide, radiating avenues has been well started and at your next meeting in Washington will be, I hope, in use. The plaza itself will take longer to complete, as the great fill must settle before it can be paved and the trees will take time to grow.

"The two office buildings for congress, located on Capitol Hill; the Museum, and the new Agricultural building on the Mall, have been begun since you were last here, and are certain to be models of public buildings.

"The new District of Columbia Building on Pennsylvania Avenue has the foundation about finished, and if the appropriation asked for is given should be about completed when you return again. All this makes, I think, a very satisfactory showing for large public buildings under construction.

"The minor District buildings, such as schoolhouses, police and fire stations, are showing increased architectural excellence, without greatly increased cost.

"The private architecture in Washington is variable. Many fine houses and impressive edifices and churches have been

erected, but the block-building type of house, each with a little cupola, and covering acres of ground in certain sections, is, unfortunately, too prevalent. This is due, probably, to the high price of land which forbids detached houses near the city. There is, I think, a gradual improvement along the line of small, inexpensive houses of pleasing appearance.

"Besides these physical improvements there has been, I believe, a decided advance of sentiment in all this community as to the necessity of doing all possible for the development of the Capitol. The idea of the preservation of Pennsylvania Avenue between the Capitol and the White House by the erection of government buildings along the south side is rapidly gaining ground; the adoption of the 800-foot clear avenue in the Mall by the locating of the new buildings therein; the consent of the property owners surrounding the new plaza of the railroad station as to the limitation of the height of the abutting structures; the regulation as to the height of buildings generally on streets and avenues; the almost universal demand as to the diminishing of the smoke; the general desire for the proper development of the park system all indicate a general public interest which must produce good results.

"I am glad, therefore, in welcoming you to Washington, to be able to announce advances, not so rapidly, to be sure, but still decided advances, and when you come again in two years, I trust you will find all these new buildings almost or entirely completed; still further steps taken toward our objective and still greater interest in the disposition of all, throughout the United States, to work for that goal."

PRESIDENT'S ADDRESS.

The annual address of the president of the institute was then read by Mr. Eames. In the course of his address Mr. Eames referred to the work of the members for the past year and of the objects of the institute. He declared there seems to be less interest taken in the architecture of public buildings by Congress than was formerly the case, and the members of the institute could, in a measure, provide a remedy for this. The former presidents of the institute have taken this matter very seriously, he said, and have worked to promote a better era. He expressed the hope that future presidents will do the same.

Mr. Eames referred to the establishment of the American Academy at Rome and of the objects of the institution. The location of this academy was decided upon after fifty years of precedent. Congress is to be asked to incorporate it according to the laws of the United States, and more than a hundred prominent artists, sculptors, men of letters, architects and financiers have come forward to help support the institution.

At the conclusion of his address Mr. Eames announced the committee that will have charge of the work of the organization during the convention and then declared the convention opened for business.

REPORT OF BOARD OF DIRECTORS.

The first on the program of order of business was the report of the board of directors, which was presented by Mr. William A. Boring, of New York, second vice-president of the institute. In his report Mr. Boring stated that the membership of the institute last year was 746, of whom 353 were fellows and 393 associates. The number of applications received during the year was satisfactory, but action on all the applications was not so satisfactory. Some fifteen applications presented from all sections of the country were rejected.

The board of directors investigated and found that the applicants were desirable for membership, and it was thought there must be some mistake about the rejections. Another ballot was therefore taken, a signed ballot this time instead of a secret one, and this time the applications were also rejected. The rejection was caused by the votes of the Brooklyn chapter of the institute, and in the report the board of directors state that they can find nothing to sustain the objection of the Brooklyn members to the admission of these particular applicants. Nothing more could be done in the matter, however, because the board of directors had reached the limit of its authority in the premises when the second election was ordered.

At this juncture President Eames excused himself from the meeting on account of a business engagement, and Mr. Frank Miles Day, of Philadelphia, first vice-president of the institute, took charge of the proceedings. The reports of the treasurer and auditing committees were presented and the finances of the institution were discussed at length.

REPORTS OF COMMITTEES.

Reports from standing and special committees were then announced as follows: Judiciary, Alfred Stone, chairman; house and library, Robert Stead, chairman; education and publication, H. L. Warren, chairman; foreign correspondence, Glenn Brown, chairman; contracts and lien laws, Alfred Stone, chairman; applied arts and sciences, and on metric system, William G. Preston, chairman.

On government architecture—George B. Post, chairman.

On examinations and admission to the institute—Edgar V. Seeler, chairman.

On co-operation with the architectural league of America—W. B. Ittner, chairman.

On competitions—Glenn Brown, chairman.

On Washington city—W. S. Eames, chairman.

On municipal improvement—Frank Miles Day, chairman.

On world's congress—T. C. Young, chairman.

For securing funds for the purchase of the octagon—J. M. Carrere, chairman.

On nomination for honorary and corresponding members—Frank Miles Day, chairman.

Delegate to national conference, electric code and to meeting of National Fire Protection Association—Alfred Stone.

REPORT OF DELEGATE TO NATIONAL FIRE PROTECTION ASSOCIATION.

The undersigned, appointed by the President as a delegate to the National Fire Protection Association, which held its annual meeting in the assembly room of the New York Board of Fire Underwriters in New York, May 24th, 25th and 26th, begs leave to report that he attended all the sessions of the meeting and by invitation of the officers was invited to partake in the deliberations, was given the privilege of the floor and received many courtesies from the officers and members.

The subjects discussed took on new and increased importance and interest because of the knowledge gained by the three exceptionally severe conflagrations—that at Baltimore, which began a little before 11 a. m. Sunday, February 7th, lasted for about thirty hours, burned over an area of eighty city blocks, covering about one hundred and fifty acres, destroying in whole or in part about twenty-five hundred buildings, many of them of superior construction, including a number of modern so-called fireproof or semi-fireproof buildings, in the main business section of the city—office buildings, banks, power houses, hotels, wholesale dry goods houses, warehouses, factories, docks and lumber yards—entailing a loss of about $75,000,000.00; that at Rochester in the latter part of the same month, which had many of the characteristics of the Baltimore fire, but fortunately was not accompanied by a high wind as in Baltimore and was therefore much less disastrous; that at Toronto April 19th, which burned over one hundred buildings, entailing a loss of about $8,500,000.00; and to them can be added the fire at the Iroquois Theatre in Chicago with its frightful loss of life.

The subjects discussed were too numerous to be enumerated, but those of especial interest to architects were:

Special Hazards and Fire Record.
Signaling Systems.
Value of Steam Jet as an Extinguishing Agent.
Theatre Construction and Equipment.
Fire Resistive Construction.
Installation of Automatic Sprinkler Equipments.
Fire Protection Coverings for Window and Door Openings.
Uniformity of Requirements.
Protection of Buildings Against Lightning.

These subjects were introduced by reports of special committees appointed at the previous meeting held a year before, showing patient and exhaustive investigation and consideration by the several committees and carefully prepared recommendations of rules to be adopted, specifications of methods of construction and installation, suggestions for improvements and amendments to requirements, in order that the best terms of insurance may be obtained.

The objects of the National Fire Protection Association are: "To promote the science and improve the methods of fire protection; to obtain and circulate information on this subject and to secure the co-operation of its members in establishing proper safeguards against loss of life and property by fire." The active members are: Insurance boards and insurance associations having primary jurisdiction and national institutes, societies and associations interested in the protection of life and property against loss by fire, but its articles of association declare "That through membership none are pledged to any course of action."

The annual dues are $15.00.

All of the rules and requirements thus far recommended by this body have been adopted by the National Board of Fire Underwriters.

With a consciousness that its ends could better be obtained if it had in its list of active members other national societies than those which are connected with the insurance interests only, it passed at its last meeting amendments to its articles of association so as to include the engineering and architectural societies, and invites the American Institute of Architects to become an active member.

It would seem that the objects of the association and the subjects considered at its annual meetings are such as should enlist our interest and co-operation and that certain advantages would accrue to our members and to their clients if the Institute should take an active part in this organization having in charge the compilation of insurance rules and requirements affecting the construction and equipment of buildings.

The Secretary of the Association, Mr. W. H. Merrill, Jr., of Chicago, at the head of the laboratory of the National Board of Fire Underwriters, to whom we are under especial obligations because of the information which is so freely given of the results of the laboratory investigations conducted by him in matters of fire hazard and protection in general, but more especially as relates to electrical construction and installation, is anxious to have us signify our acceptance of the invitation to join the Association, as he especially desires to have some of our members appointed as soon as may be upon committees of the Association.

In conclusion, your delegate advises favorable action and submits for the consideration of the convention a resolution to that end.

Respectfully submitted,
ALFRED STONE, Delegate.

Resolved, That the American Institute of Architects accepts the invitation to become an active member of the National Fire Protection Association and authorizes its President to appoint one or more delegates to represent it at the stated meetings of the Association and to act on committees thereof.

REPORT OF DELEGATE TO UNDERWRITERS' NATIONAL ASSOCIATION.

In making report of the meeting of the Underwriters' National Association on the national electric code, held in New York December 7th and 8th, 1904, your delegate would again call attention to the value of the work done at these annual conventions and the still greater value of the work of its committee and of the investigations made at the laboratory of the National Board of Fire Underwriters at Chicago under the direction of W. H. Merrill, Jr., whose thorough patient and intelligent series of tests and publications of the same have done so much to raise and maintain the standard of electrical construction.

The semi-annual publication of the list of electrical fittings examined at the laboratory and approved by the Underwriters' National Electrical Association has been of inestimable advantage in that it gives a reliable list of the best obtainable devices manufactured in accordance with the standard given in the national code, a list so reliable that one can safely use in electrical installation any article named on the approved list, provided it bears the manufacturer's name or a distinguishing mark as directed, and can with equal safety reject any material not on the list or not properly marked, one precaution only being necessary and that is that the last edition be used. This precaution is necessary, as the requirements of the code grow more stringent as experience shows that they should be and because uniformity is constantly sought where possible. To cite but two examples:

1. As an illustration of more stringent requirements; the construction of switches with reference to distance apart of the two poles according to voltage and amperes carried, the strength of their parts, their construction to insure automatic opening when the current is shut off, etc.

2. As an illustration of uniformity: The construction and standardizing of fuses, by inclosing them to secure immunity from danger of fire from hot metal, having them so made that all fuses of the same voltage, no matter who makes them, shall be of the same color or have some equally distinctive mark and shall be of the same length and size, making it impossible to put in a fuse of the wrong capacity and enabling any one, whether he has a knowledge of electricity or not, to purchase the proper fuse of any dealer carrying a stock of fuses, no matter whose make he may sell.

Sometimes reasonable complaint is made of the interpretation of the rule of the code by local inspectors, and it is only within the last year that this difficulty has been overcome, the underwriters having created a board to which appeal can be made. This board will consider all complaints, hear both parties and decide whether the underwriter will insure buildings if constructed as proposed or whether they will uphold the objection of the local inspector and thus necessitate a change in construction.

The importance to our clients of establishing rules and adhering to them can readily be seen when we reflect that in order to secure low rates in insurance, in fact any insurance, conformity to the code, is a necessity and is so great a necessity that the requirements of the underwriters is of more importance and will be more willingly conformed to by our clients than the requirements of municipal building laws, as the latter are compulsory, while the former appeal to the pockets of the owner. It, therefore, seems expedient, having in view the interests of our clients and our own interests, to continue our representation at these annual conferences, which are very fully attended by the representatives of the great electrical manufacturing concerns like those of Edison, Westinghouse, General Electric, etc.; by contractors for installing electricity in buildings and for the erection of electrical plants, by local inspectors, members of the American Institute of Electrical Engineers, American Society of Mechanical Engineers, American Street Railway Association, National Association of Fire Engineers, representatives of the underwriters and the American Institute of Architects, whose delegate I have had the honor to be for nine successive years.

To appreciate what has been accomplished since the first attempt was made at the conference in New York in March, 1896, to bring about uniform requirements and practice throughout the United States by establishing a national electrical code, it is only necessary to recall the utter chaos and inability to know what would be required in different localities at that time and compare it with present conditions, which are not yet perfect. Owing to the personal factor, the rules of the electrical code are not even yet uniformly interpreted by all inspectors, but this difficulty is, however, now overcome by the creation of the board of appeal before referred to, whose decisions are final and will soon create precedents and rulings which will abide, to which inspectors will have to conform and can therefore be relied upon.

Your delegate, in closing, appreciating as he does the importance of the rules embodied in the code for securing proper electric installation and that to nobody do they appeal with more urgency than to the architects, presents a resolution favoring a continuance of the practice of giving the President power to appoint a delegate from the Institute and urges its adoption.

Respectfully submitted,
ALFRED STONE, Delegate.

Note.—Address of President Eames, papers and committee reports, etc., will be published in our February number.

EMINENT MEN AT BANQUET.

At 8 o'clock the architects and their guests assembled in the large dining hall of the Arlington for their annual banquet. Statesmanship, theology and finance were represented. The President of the United States was there, as was also his Secretary of State. Cardinal Gibbons, Rt. Rev. Dr. Satterlee, J. Pierpont Morgan and A. J. Cassatt were among the guests.

The banquet hall was decorated with palms, ferns and roses. A part of the United States Marine Band furnished the music, while at intervals throughout the banquet a double quintet sang selections.

THE TOASTS AND RESPONSES.

The toasts proposed and those who responded to them were as follows: "The President of the United States," Mr. Eames, president of the institute; "The Painters," John La Farge; "The Sculptors," Augustus St. Gaudens; "The Place of Art in Civilization," Nicholas Murray Butler, president of Columbia University, and his Excellency Jules Jusserand, French Ambassador; "Art and Religion," his Eminence James Cardinal Gibbons; "The Simple Life," Hon. Elhu Root; "The Supreme Court of the United States," Justice John M. Harlan; "The Senate of the United States," Senator Peabody Wetmore, of Rhode Island; "The House of Representatives," Congressman James T. McCleary, of Minnesota; "The Making of a Beautiful City," George B. McClellan, Mayor of Greater New York.

President Eames in introducing Cardinal Gibbons to respond to the toast, "Art and Religion," said he stands for the church, to which architecture owes its most noble expressions.

ADDRESS OF CARDINAL GIBBONS.

I suppose, ladies and gentlemen, that I received an invitation to this banquet of most distinguished men simply because I represent the ancient church, which has always been the patroness of architecture and the nursing fostermother of the arts and sciences. * * * * *

Architecture and sculpture are among the most enduring creations of human genius, they survive their distinguished authors by years, by centuries, aye, by cycles of ages. We all are filled with admiration when we contemplate those great monuments of Egypt, the Pyramids, that have now stood for upward of five thousand years upon the sands of Egypt, and they are destined to stand there as long as flows the turbid Nile. But who was the great architect that conceived the plan of the great works? We know not. The most searching investigations of archæologists and historians leave us in more or less doubt and conjecture as to who were the architects that designed those imperishable monuments, or who were the kings to whom they were dedicated.

Religion and architecture have always been inseparably united. They have always been linked together, and they have gone down the ages hand in hand, inseparable. And this is true not only of Christian, but even of the pagan architecture, the most noble works of architecture that have come to us from pagan times are consecrated to religion, but, as I have said, the monuments exist and are perpetuated, whereas their authors passed away. We gaze in admiration upon the great monuments of religion in France, and I would appeal to the distinguished French Ambassador here for confirmation of the truth of what I say. We cannot but admire that magnificent cathedral of Rouen, and also, I would say to you as architects, that if you go to Rouen do not forget to see that noble little church of St. Ouen, the most graceful and beautiful work of art perhaps in existence. The Church of Saint Ouen bears the same relation to the cathedral that a graceful bride does to a mature matron. (Applause.) We ought to admire the beautiful Cathedral of Notre Dame in Paris, the Cathedral of Rheims and Chartres and all the other cities of France. We admire the Cathedrals of Canterbury and York and Durham and Salisbury, but, gentlemen, who were the authors of those great monuments that have passed down to us? Who was the author of that great Cathedral of Cologne, in my judgment the grandest specimen of architecture in the world? I prefer it to the Cathedral of Milan, because its outlines are more sharply and clearly drawn. While I earnestly hope that the members of this distinguished gathering will share in the bliss of their prototypes, I trust also that some incense of human fame will be added, and that the wave of oblivion will not pass over you, that your memories and your good deeds may be recorded in the hearts and affections of the American people. (Applause.)

Already, gentlemen, you have done much to make the City of Washington most attractive, and to draw illustrious strangers to the capital. There are public buildings and private edifices to-day in Washington of which any city might be proud. Perhaps there is one exception to which I would refer in a faltering fashion. The story is told that the late General Sheridan was brought over to inspect the Pension Office carefully, and he said: "That building has only one defect." He was asked what that was, and he said that it was "fireproof." (Laughter.)

In speaking of architects and artists, I deem it my duty to associate with them another class of benefactors to society, and I mean their patrons, some of whom are here to-night. I may mention Mr. Morgan and Mr. Cassatt. (Applause.) Many a mighty genius would have perished from the earth and his name would have been obliterated to-day were it not for the patronage of their munificent patrons. The works of Virgil and of Horace might have perished from the earth and the memories of them never have come to us were it not for the munificent patronage of a Maecenas, and the name of Michael Angelo, who designed the grandest cathedral that ever was erected to Almighty God would have perhaps been lost to fame, were it not for the family of the Medici. I would therefore close by paraphrasing a well-known sentence of Webster when I say: "The Architect and his Patron one and inseparable now and forever." (Applause.)

(At the close of Cardinal Gibbons' remarks Mr. Roosevelt, President of the United States, entered the hall.

The President (Mr. Eames): Gentlemen, I have the honor of presenting to you the President of the United States. (Applause.) President Roosevelt responded to the toast, "The President of The American Institute of Architects."

THE ADDRESS OF PRESIDENT ROOSEVELT.

Mr. President, gentlemen: It is a great pleasure to have the chance of coming here this evening and saying a word of greeting to a body of men who are engaged in doing work for this Republic which is to count, not merely in the present generation, but during the lifetime of many generations to come. We hear a great deal about true Americanism. Now the real American, the American whom it is worth while to call such, is the man whose belief in and work for America are not merely for the America of to-day, but for the America of the future. (Applause.) It is a comparatively easy thing to do work when the reward is to come in the present; but every great nation that has ever existed on this globe has been great because its sons had in them the capacity to work for the well-being of generations yet unborn. (Applause.) Such spirit is peculiarly necessary when the work we desire to have done is essentially work of a non-remunerative type—non-remunerative in more than one way, non-remunerative in money, and it may be in fame. We do not know the names of the architects and the builders of the great cathedrals whose magnificent beauty is an heirloom of civilization. We do not know the names of the builders of the great majority of the works to which every man with an aspiration after beauty naturally turns when he thinks of the past. We owe that beauty, we owe the elevation of thought, the elevation of mind and soul that come from association with and belief in it to the fact that there were a sufficient number of men who worked in the spirit that Ruskin prayed in, the spirit of doing the work not for the sake of the fee, but for the sake of the work itself. (Applause and cries of good, good.) There are things in a nation's life more important than beauty; but beauty is very important. And in this nation of ours, while there is very much in which we have succeeded marvelously, I do not think that if we look dispassionately at what we have done we will say that beauty has been exactly the strong point of the nation. (Laughter.) It rests largely with gatherings such as this and with the note that is set by men such as those I am addressing to-night to determine whether or not this shall be true of the future.

A very large percentage of the durable work, the work which is lasting and therefore the beauty of which, if it exists, is also lasting, must be done by the Government. Great buildings and beautiful buildings will be erected by private subscription; but many of the greatest buildings must necessarily be erected by the Government, national, state or municipal. Those in control of any branch of that Government necessarily have but an ephemeral lease of power. Administration succeeds administration; Congress succeeds Congress; legislature succeeds legislature; and even if all of the administration, all of the congresses are actuated (a not necessarily probable proposition) by an artistic spirit, it would still remain true that there could not be any coherence in their work if they had to rely on themselves alone. The best thing that any administration, that any executive department of the Government, can do, and, if I may venture to make any suggestions to a co-ordinate branch, Senator Cockrell, I would say that the best thing that any elective legislative body could do in these matters is to surrender itself within reasonable limits to the guidance of those who really do know what they are talking about. (Laughter and loud applause.) The only way in which we can hope to have worthy artistic work done for the nation, or for a state or municipality is by having such a growth of popular sentiment as will render it incumbent upon successive administrations, successive legislative bodies, to carry out steadily a plan chosen for them, worked out for them by such a body of men as that gathered here this evening. (Applause.) What I have said does not mean that we shall go here in Washington, for instance, into immediate and extravagant expenditures on public buildings. All that it means is that whenever hereafter a public building is provided for and erected it should be erected in accordance with a carefully thought out plan adopted long before (applause); and that it should be not only beautiful in itself, but fitting in its relations to the whole scheme of the public buildings, the parks, the drives of the District. (Applause.) Working through municipal improvement commissions, very great progress has already been made in rendering more beautiful our cities from New York to San Francisco. An incredible amount remains to be done. But a beginning has been made and now I most earnestly hope that in the national capital a better beginning will be made than anywhere else, and that can be made only by utilizing to the fullest degree the thought and the disinterested effort of the architects, the artists, the men of art, who stand foremost in their professions here in the United States, and who ask no other reward save the reward of feeling that they have done their full part to make as beautiful as it should be the capital city of the Great Republic. (Applause.)

REMARKS OF AUGUSTUS SAINT GAUDENS.

Speaking to the toast, "The Sculptors," Mr. Saint Gaudens said: "Charles the Charmer, in other words, Charles F. McKim, has assured me that it is essential that I should speak to-night. This is as flattering as it is fallacious, for, although I have doubts about many things in life, on one subject I have absolutely none, and that is the utterly hopeless and helpless limitations of my oratory. It is much more calculated to reduce listeners to tears than to contribute to their entertainment or instruction.

You will, therefore, understand why I refrain from expressing anything more than my great pleasure at learning of the munificent gifts to what we have so much at heart, the American Academy in Rome, and at being included in a company assembled to honor that which makes for the nobility and elevation of life—the love of beauty, character and dignity in our surroundings, as much in the Halls of Law and Government as in our homes, or wherever we live, move, and have our being."

MOSAICS.

The Baltimore and Ohio Railroad has established a mixed competition for the purpose of selecting an architect for the proposed new office building at the northwest corner of Baltimore and Charles streets, Baltimore. A committee consisting of the president, three vice-presidents and chief engineer, with Professor William R. Ware as its adviser, will make the award.

The Powers Regulator Company has installed a very complete system of automatic temperature regulation in the new Minnesota State Capitol Building, just completed, at Saint Paul. This building is heated almost entirely by the indirect system of fans and coils, and The Powers Company have installed nearly two hundred of their pneumatic thermostats to accomplish the automatic control of temperature in all the rooms of this building.

The International Jury of Awards of the Louisiana Purchase Exposition have awarded to the Berger Manufacturing Co. of Canton, Ohio, a gold medal because of the merits and artistic beauty of their "Classik" Metal Ceilings. This company had a booth at the St. Louis Exposition, constructed entirely of sheet metal displaying to excellent advantage the beauty of their classified designs in metal ceilings and side walls. "Classik" Ceilings were originated by the Berger Co., and are known the world over.

It is very gratifying to all loyal Americans that the highest award for plumbing fixtures at the St. Louis World's Fair was given to an American company. The Standard Sanitary Mfg. Co. of Pittsburg. This award is highly prized by the company as their ware was in competition with the sanitary goods of both domestic and foreign manufacture. A powerful evidence that the Grand Prize was merited by this company is the fact that their ware has received the highest award at every great exposition since 1893, a grand total of nine. Every architect would find the catalogues of this company of much value, and also the attractive magazine, "Modern Sanitation," issued by the company.

OUR ILLUSTRATIONS.

Competition, Cincinnati Chapter American Institute of Architects. Sketches of Old Colonial Work, Cincinnati. Drawn and measured by L. Willeke. Two double sheets are shown; also, double page sheet drawn and measured by L. Wellman.

The Hall Building, Honolulu, H. T. O. G. Traphagen, architect.

"Yellow Pine Exhibit," by Southern Lumber Manufacturers' Association at Louisiana Purchase Exposition. Designed by Louis W. Smetana, St. Louis.

Missouri State Penitentiary, Jefferson City, Mo., Eckel & Mann, architects; Miller & Opel, associate architects.

Floor Plans, New Illinois Athletic Club, Chicago, Barnett, Haynes & Barnett, architects.

SPECIAL PLATES.

New Illinois Athletic Club, Chicago, Barnett, Haynes & Barnett, architects.

View in Dining Room, Residence of Thomas Morrison, Pittsburg, Pa. F. J. Osterling, architect.

Residence of J. R. Thompson, Chicago. H. R. Wilson, architect. An Exterior View and View in Breakfast Room are shown.

View in Hall. Residence of F. E. French, Evanston, Ill. Ernest A. Mayo, architect, Chicago. An Exterior Detail is also given.

View in Dining Room. Residence of D. O. Hill, Chicago. Frederick W. Perkins, architect.

Entrance Detail. Residence of Raymond G. Sykes, Chicago. Ernest A. Mayo, architect.

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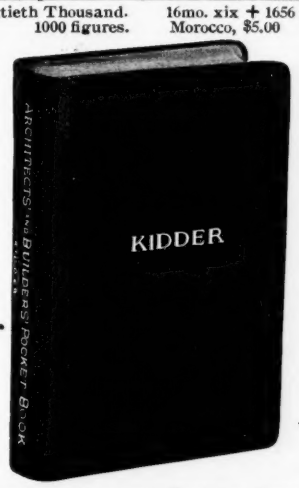

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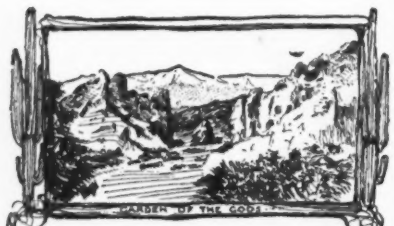

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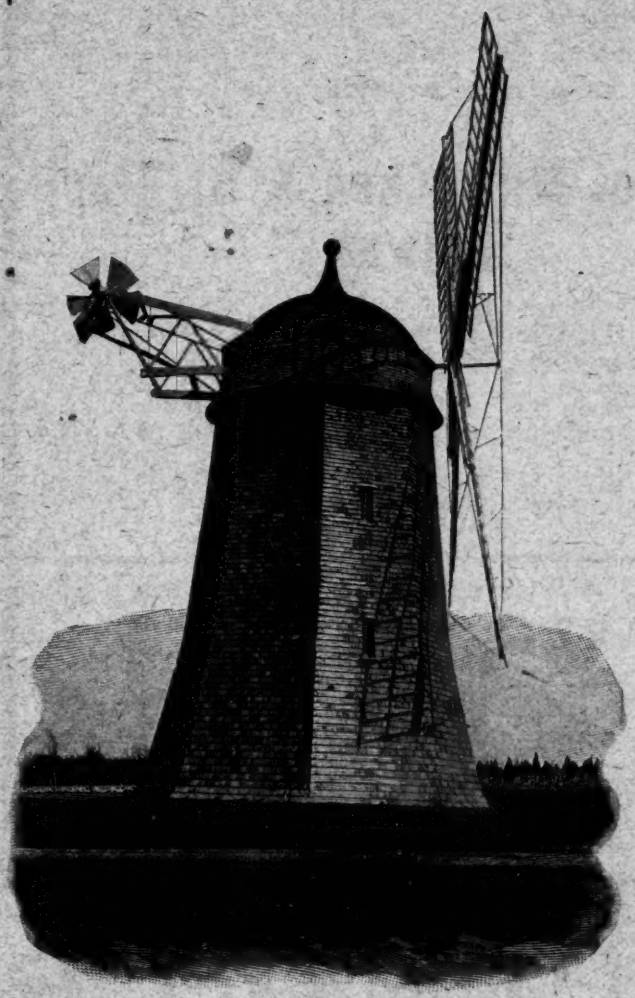

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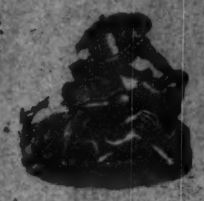

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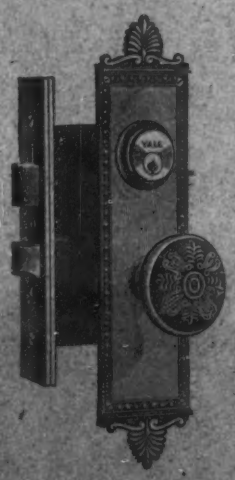

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